

Progress in work on the draft Industrial Emissions Directive

Małgorzata TYPKO, Department of Environmental Instruments, Ministry of the Environment

Please cited as: CHEMIK 2010, **64**, 6, 418-423

In late 2007 the European Commission published the **new draft Directive of the European Parliament and of the Council on industrial emissions (IPPC)** [1]. The aim of the project was to unify and consolidate valid Community legislation on industrial emissions, with a view to improve the system of industrial pollution prevention and control, and consequently to improve environmental quality by reducing industrial emissions.

The beginnings of the project date back to 2006, when the European Commission decided to launch a review of the existing legislation on industrial emission control, and specifically of the 1996 Directive on Integrated Pollution Prevention and Control (IPPC). The strategic goal of the IPPC Directive was to reduce the potentially adverse effects of industrial plants to a minimum, achieving thereby maximum environmental efficiency.

In order to achieve this goal, the IPPC Directive introduced:

- an obligation to obtain an integrated permit, which regulates in a holistic manner not only all aspects of environmental use (emissions, resources), but also the rules of running the manufacturing process
- an obligation to proceed in accordance with the requirements of the best available technique (BAT)
- BAT reference documents (BREFs) as a tool for supporting identification and dissemination of the best available techniques.

The basic principle of the Directive was flexibility and establishing conditions of carrying out activities for each individual operator.

The Member States were supposed to fulfil the new obligations by 30 October 2007. However, in 2006 the European Commission concluded that the implementation of the IPPC Directive was not proceeding at a satisfactory rate. The evidence of that were the results of investigations undertaken by the European Commission, which showed slow progress in the process of granting integrated permits, deficiencies in the implementation of BATs (one of the reasons being delays in drawing up reference documents by the EC) and in consequence unsatisfactory reduction of industrial emissions. Moreover, all States reported similar interpretative and administrative problems with the implementation of the IPPC Directive.

Having taken all this into consideration, the Commission came to the conclusion that there is a need to revise the IPPC Directive in the spirit of a "better regulation" strategy: *"It is appropriate to revise the legislation related to industrial installations in order to simplify and clarify the existing provisions, reduce unnecessary administrative burdens and implement the conclusions of the Commission Communications on the Thematic Strategy on Air Pollution, the Thematic Strategy for Soil Protection and the Thematic Strategy on the Prevention and Recycling of Waste (...). Those Thematic Strategies set objectives to protect human health and the environment which cannot be met without further reductions of emissions arising from industrial activities."*

The aim was to amend the existing IPPC Directive or to draft a completely new one.

The latter option was chosen, and in late 2007 the draft of the Industrial Emissions Directive mentioned before was presented. There was a little surprise, as it turned out that the draft covers not only the current IPPC Directive, but also 6 other still valid directives:

- Directive 2001/80/EC on the limitation of emissions of certain pollutants into the air from large combustion plants (LCP)
- Directive 2000/76/EC on the incineration of waste (WI)

- Directive 1999/13/EC on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations (VOC)
- 78/176/EWG, Directives 82/883/EEC and 92/112/EEC concerning titanium dioxide manufacture (TiO₂).

The directive to be drawn up is supposed to replace all the legislative acts listed above. It seems, however, that the simplification of the legislation is only limited to the reduction of the number of legislative acts, as the draft does neither unify (even with regard to definitions) nor substantially simplify the regulations in question. Looking at the titles of the directives, one can also see that the title of the new directive (*"on Industrial Emissions"*) is in some way misleading, as that directive does not refer in detail to all emissions arising from industrial activities (waste, wastewater, noise), instead it focuses particularly on emissions to air, and those from some types of installations only. Therefore, the balance in the integrated approach to environmental protection is disturbed. The inclusion of the issues of titanium dioxide manufacture also raises doubts, as the problem concerns only some twenty odd installations in Europe.

We have, anyhow, obtained a voluminous document of complex and non-uniform structure, varying in the degree of detail, still not precise enough, and leaving much to be resolved by the European Commission in an indeterminate future.

As far as the substance of the matter is involved, three main areas may be indicated where changes are proposed in relation to the current legislation:

- I. Strengthening the role of BREFs in determining the requirements of the best available techniques for individual installations

According to current regulations, BREFs do not have legal status and do not constitute a list of the only permissible technologies and operation methods. BREFs do not specify emission limits, they also do not take into account the local conditions, technical and economical conditions or the age of the installation. They are meant to give guidance in determining reference levels for proper defining of BAT requirements for a given installation. However, they are not the only source of knowledge and basis for deciding on the provisions of the integrated permit. In such circumstances there is considerable freedom in establishing operating conditions for individual installations. The effect is that there may be significant differences in, for instance, permissible emission values specified for similar installations in different locations. This approach came under criticism of the EC, which suggested making amendments in order to unify the approach in determining BAT requirements. An attempt was therefore made to put BREFs in legal shape. As a result, in June 2009 the EU Council adopted a compromise text which stated that:

- in addition to BAT reference documents, additional documents will be drawn up (*BAT Conclusions*) which will be adopted through Comitology and published afterwards
- BAT Conclusions would form basis for specifying permit provisions, permissible emissions specified in integrated permits have to be within the ranges of the BAT Conclusions
- in specific cases, on the basis of an assessment of the environmental and economic costs and benefits taking into account the technical characteristics of the installation concerned, its geographical location and the local environmental conditions, emission limits outside of those specified in BAT Conclusions could be set; there is, how-

- ever, no mention of any departures from the emission standards defined in the Directive (LCP, WI, TiO₂); the EC may establish additional criteria for the granting of a derogation
- the above mentioned provisions should be taken into account when reconsidering the integrated permit after the new regulations become effective; within 4 years of publication of the decision on adopting the BAT Conclusion (its update), the authority should ensure:
 - ✓ assessment and amendment, if necessary, of permit conditions to make them compliant with BAT Conclusions
 - ✓ compliance of installation operation with the new permit.

In consequence we would then have a new document (BAT Conclusions) which would be legally binding and would not be subject to the co-decision procedure. Knowing the quality of BREFs, the manner of drawing up and adopting them, there are many doubts and concerns about the effects of this solution (its effect on the economy, on innovation). Political games and favouring of some technologies are already observed during the drawing up of BREFs. This will probably escalate when BREFs become legally binding documents. The industry will be forced to apply technologies described in BREFs.

What's more, during further work of the European Parliament, another new instrument was proposed to supplement BREFs: the so-called *European Safety Net*. This would include minimum emission limit values for all industries covered by the IPPC Directive, which could not be exceeded by any installation. This proposal was put forward during the first European Parliament reading and then rejected by the Council. Now, during the second reading, the proposal returned in a significantly more elaborate form. And there are signs that it can now be adopted by the Parliament. As the final form of these regulations has not been decided yet, it is difficult to tell how this concept would function. Nevertheless, given that this mechanism would work independently and in parallel with the Seville process, it seems that it diminishes the role of BREF documents adopted in this process. Therefore the result achieved would be contrary to the goal expected. This issue will certainly be the subject of heated discussions during Council meetings. It seems that some compromise will be worked out and the European Safety Net will eventually be included in the Directive in some form.

2. Tightening the requirements for Large Combustion Plants (LCP)

The European Commission stated that: *“Large combustion plants contribute greatly to emissions of polluting substances into the air resulting in a significant impact on human health and the environment. In order to reduce that impact and to work towards meeting the requirements of Directive 2001/81/EC and the objectives set in the Commission Communication on the Thematic Strategy for Air Pollution, it is necessary to set more stringent emission limit values at Community level for certain categories of combustion plants and pollutants”*, and therefore significant changes were made in regulations concerning Large Combustion Plants.

First of all, the definition of the emission source has been made more precise: according to the draft, a single source (plant) comprises all combustion plants that discharge flue gas through one stack. Boilers, for which the application for building permit was filed after 30 June 1987, including those where flue gas discharge through a common stack is technically viable (in the opinion of the authority) are treated as one combustion plant. Boilers below 15 MW are not accounted for in the total capacity. This has a serious impact on the determination of emission standards (dependent on plant capacity) for these facilities.

The draft also includes much more stringent emission standards for the main pollutants (SO₂, NO_x and particulates), particularly for coal-fired plants. According to the Commission proposal, the new requirements would become effective in 2016. And this was probably the issue that aroused the most intense excitement during work on the Directive.

When assessing the feasibility of implementing these new regulations in Poland, the following threats have been identified:

- the need to adapt to the new requirements those plants, which have not yet complied with the requirements of the current LCP Directive (transition periods) – this is not possible within the time specified, and often it is not economically justified; the situation is particularly tough in the heating sector
- threat to the energy security of Poland
- additional, economically and environmentally unjustified administrative burdens, due to extending the scope of the Directive to include small plants
- social impact: substantial price increases for electrical power and heat
- environmental impact: paradoxically, deterioration of air quality – increased number of low emission sources caused by individual heat consumers disconnecting from district heating systems.

During negotiations the Member States formed two distinct groups which adopted diametrically opposite positions: a strong group of supporters of the new solutions and an equally strong group of opponents. It should be pointed out that the discussion was not about the proposed emission limits. Everyone agreed that emissions to the environment must be reduced. The question was the manner of achieving compliance and the necessary time. Eventually, a compromise has been agreed upon after long and intense discussions. The agreement reached allowed for the following transition mechanisms:

- Transitional National Plan (TNP) – as an alternative to emission limit values – for a defined period (2016-2020) for plants for which permits were granted before 1 July 1987; after 1 January 2020 all plants have to comply with at least the requirements defined in the Directive
- opt-out – plants to be shut down before 1 January 2023 and to operate for not more than 20,000 hours in years 2016-2023 would not be included in TNP and would be exempt from compliance with the emission limit values
- peak load plants – operating not more than 1500 hours annually, for which permits were granted before 27 November 2002 – should have their operating parameters defined in accordance with the LCP Directive
- specific regulation for heating plants (at least 50% of heat generated for public heating network) – plants with a capacity up to 200 MW are exempt from the new requirements until 31 December 2023.

It is worth noting that the last mechanism was a proposal presented by Poland, and its inclusion should be recognised as a great success, because Poland was the only country interested in such a solution.

Adoption of these solutions, in the opinion of experts, gives Poland an opportunity to adapt to the new requirements in a realistic and considerably safe manner. The condition is that these proposals remain intact during further proceeding. This, however, is rather unlikely, judging by the comments made by Members of the Parliament during the second reading.

3. New regulations concerning soil protection

The current IPPC Directive treats soil protection rather casually. It only states, quite enigmatically, that upon cessation of activity the operator is obliged to return the site to a *“satisfactory state”*. The European Commission decided to give more attention to this environmental component and it set up new requirements in this area for plant operators.

The draft provides for an obligation to draw up a report on the condition of soil and groundwater (information on the state of soil and groundwater contamination by dangerous substances for installations where dangerous substances are used, produced or released) in the case of activities that can have an adverse effect on soil or groundwater quality:

- prior to commencing activities (new installations)
- prior to the first update of integrated permit in accordance with the new Directive (existing installations). The scope of the report would include data on historical and present use of the site, current data on soil and groundwater condition (measurement results) and, if necessary, other data specified by the Commission.

Measurements should also be carried out prior to shutting down the plant. If significant contamination occurs, the operator is obliged to return the site to the state described in the baseline report. The technical feasibility of the undertaking and future use of the site can be taken into account. When contamination poses a risk to the environment and humans, the operator must take actions to eliminate such risk.

The purpose of these actions is to determine precisely the initial state to which the operator, who caused significant contamination, would be obliged to return the site as part of necessary remediation upon closure of operations. The integrated permit conditions should include requirements preventing emissions to soil and groundwater and requirements on the monitoring of soil (at least every 10 years) and of groundwater (at least every 5 years) with regard to dangerous substances. If the operator was not obliged to draw up a baseline report, he must ensure that the site will not pose any significant hazard to human health and the environment.

It is worth noting that the proposals on soil protection provisions aroused strong opposition among some Member States (incidentally mainly those, which strongly endorsed the tightening of provisions on air protection). The European Parliament urged to remove these proposals altogether from the draft. Eventually, the solutions presented above were included in the compromise package. One may, however, anticipate that these will be modified during further legislative work.

In addition to the most significant and controversial issues, the draft of the directive provides for a number of minor amendments concerning, for instance, the permit granting and update procedure, manner of carrying out inspections, reporting. The scope of Directive application has also been extended to cover new types of installations, such as off-site (operated independently) wastewater treatment plants, new types of waste management activities (for instance, recovery of non-hazardous waste: biological treatment, pre-treatment of waste for incineration or co-incineration, ash processing; temporary storage of hazardous waste), preservation of wood and wood products and the production of wood panels.

On the basis of an assessment prepared by the European Commission, the effects of implementing the new Directive would bring about such benefits as:

- substantial improvement of the state of the environment, quality of life and human health (benefits from only the implementation of the new LCP regulations would be between €7 and €28 billion a year, the number of premature deaths would drop by 13,000 a year)
- reduction of administration costs associated with permit granting and reporting (€105-255 million a year)
- no long-term impact on internal and external competitiveness of enterprises.

Leaving aside polemics with the conclusions listed above, it must be pointed out that the Commission is aware of the fact that the effects (costs and benefits) may differ significantly in the various Member States. It is apparent that the greatest cost will be borne by the poorer countries.

It is one of the reasons why from the very beginning the Polish Government assumed a highly critical position towards the draft directive. The following issues raised our doubts:

- the whole concept of the new directive
- limited flexibility in using BAT reference documents (BREFs); requirements for the power sector, unrealistic in terms of time span

- unjustified additional administrative burdens
- limited sovereignty of Member States in making decisions
- potentially high cost of implementation for the Polish economy and society, with no apparent benefits.

Poland was not the only country to voice a critical opinion, although different countries had different reasons to contest individual provisions of the directive. In effect the compromise draft drawn up after the first reading varied substantially from the 2007 version. From our point of view the compromise proposal was much more satisfactory, mainly because of the transition mechanisms proposed for adapting the power sector to the new requirements. Unfortunately this is not the final version of the directive, and news from the European Parliament have it that difficult negotiations are still ahead of us, and the final shape of the directive may well be much less satisfactory and much harder to implement. The question still remains whether the solutions proposed serve achieving the undoubtedly ambitious goals set by the European Commission which launched the process of revising the IPPC Directive, and whether the cost of implementation will not be exceedingly high. These costs and the increasingly short times for implementing new, more strict requirements, already speed up the process of technology "leaks" from Europe to countries where environmental care is not exercised. The overall effect is that global emissions increase and wasteful exploitation of resources thrives while competitiveness of the European economy diminishes.

Time schedule of work on the new directive

- December 2007 – draft published
- May 2008 – work initiated by the Council and European Parliament
- June 2009 – draft adopted by UE Council
- **Present** – 2nd reading at the EP (voting planned for July 2010)
- If the EP makes amendments – EU Council proceeds with further work according to the co-decision procedure
- 2010 – work finalised; Directive published in the EU Official Journal
- 2010-2012 – transposition to national law
- January 2014 – all existing installations must comply with the requirements of the new Directive (except for LCPs)
- July 2015 – all new sectors covered by the Directive must meet requirements
- January 2016 – LCPs must comply with the new requirements, including new emission limits
- January 2024 – termination of the derogation period for the heating sector and opt-out derogation.

References:

1. Full text of the draft directive is available on the Web:
 - http://ec.europa.eu/environment/ippc/pdf/recast/dir_2007_844_en.pdf (in English)
 - www.mos.gov.pl, integrated permits tab (translation into Polish)

M.Sc. Małgorzata TYPKO, graduated from the University of Technology and National School of Public Administration, Warszawa. Deputy Director, Department of Environmental Impact Assessment, Ministry of Environment. From 1998 to the present she works at Ministry of the Environment. Initially, chief specialist and later Adviser to the Minister, then Deputy Director of the Department of Environmental Instruments Division, Environmental Impact Assessment, currently deputy director of the Department of Environmental Instruments. In terms of competence, inter alia, IPPC.