

Manual of European Environmental Policy

The following pages are a section from the Manual of European Environmental Policy written by the Institute for European Environmental Policy.

The Manual was published by Earthscan/Routledge from 2010 to 2012. It was designed as an on-line interactive reference work and annual printed versions were also produced.

This section is the text of the Manual as published in 2012. It is therefore important to note the following:

- The contents have not been updated since 2012 and no guarantee is given of the accuracy of the contents given potential subsequent developments.
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National emission ceilings

Formal references	
2001/81/EC (OJ L309 27.11.2001)	Directive on national emission ceilings for certain atmospheric pollutants.
Proposed 9.6.1999 – COM(99)125 (OJ C E/200/56/34)	
Legal base	Article 192 TFEU (originally Article 175 TEC)
Binding dates	
Formal compliance	27 November 2002
Draw up national programmes	1 October 2002
Inform the Commission of the national programmes	31 December 2002
Update the national Programmes	1 October 2006
Inform the Commission of the updated national programmes	31 December 2006
National emission inventories and projections to be reported	End of each year
Comply with national emission ceilings	2010
Progress reports by the Commission	2004, 2008 and 2012

Purpose of the Directive

The aim of the Directive is to reduce the adverse effects of acidification (water and soil), ground-level ozone (air) and eutrophication (water and soil) by setting national emission ceilings for sulphur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds (VOC) and ammonia (NH₃) but leaves the Member States with the flexibility to determine how to comply with them. The national emission ceilings are intended to meet ‘broadly’ the interim environmental objectives for reduction of acidification and ground-level ozone to be achieved by 2010. Therefore, the interim environmental objectives will serve as an indicator of the effectiveness of the national emission ceilings in order to meet the benchmark date 2020 for achieving the long-term goal of keeping within critical loads and protecting people against the health risks caused by air pollution.

Summary of the Directive

The Directive covers all sources that arise from human activities apart from:

- Emissions from international maritime traffic.
- Aircraft emissions beyond landing and take-off cycle.
- Emissions in the Canary Islands (for Spain).
- Emissions in the overseas departments (for France).
- Emissions in Madeira and the Azores (for Portugal).

Directive 2001/81/EC was amended by the Act concerning the conditions of accession of the Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovenia and the Slovak Republic, OJ L236 23.9.2003 and Council Directive 2006/105/EC of 20 November 2006, OJ L363 20.12.2006, with regard to the accession of Bulgaria and Romania, so setting national emission ceilings for these Member States.

In order to meet the long-term objectives to limit emissions of acidifying and eutrophying pollutants and ozone precursors the years 2010 and 2020 has been set as benchmarks. By the year 2010 Member States shall limit their annual national emissions of SO₂, NO_x, VOC and NH₃ to those laid down in Table 1.

These national emission ceilings are intended broadly to meet the following interim environmental objectives, for the Community as a whole, by 2010:

- The areas where the critical loads of acidification are exceeded shall be reduced by at least 50 per cent compared to 1990 levels.
- The ground-level ozone concentration above the critical level for human health shall be reduced by two-thirds compared to 1990 levels.
- The ground-level ozone load related to health shall not exceed an absolute limit of 2.9 ppm.h in any grid cell (150 km × 150 km²)(150 km × 150 km square).
- The ground-level ozone load above the critical level for crops and semi-natural vegetation shall be reduced by one-third compared with the situation in 1990.
- The ground-level ozone load related to crops and semi-natural vegetation shall not exceed an absolute limit of 10 ppm.h (expressed as an exceedance of the critical level of 3 ppm.h).

Member States are also required to draw up national programmes by 1 October 2002 (inform the Commission by 31 December 2002), and to revise them as necessary by 1 October 2006 (inform the Commission by 31 December 2006). The national programmes must include information on adopted and envisaged policies and measures and the effect of these on emissions in 2010 and be made available to the public and to appropriate organizations such as environmental organizations.

In addition Member States must prepare, annually update and report national emission inventories and emission projections for 2010 for the pollutants using the methodologies specified in Annex III. The information in the emission projections must be such that it enables a quantitative understanding of the key socioeconomic assumptions. Based on this information the Commission, assisted by the European Environment Agency and in cooperation with the Member States, will establish its own inventories and projections, which will be publicly available.

In 2004 and 2008 the Commission will report to the European Parliament and the Council on the progress on the implementation of the Directive. In drawing up the report the Commission must take into account the Member States' national programmes as well as their emission inventory and projection reports. The report will also include an economic assessment and the socioeconomic impact of the implementation of the national emission ceilings. The Directive also lists a wide range of other issues that must be taken into account, such as:

- Any new community legislation setting emission limits or product standards for relevant sources. Development of Best Available Techniques (BAT) [ch 4, Integrated pollution prevention and control].
- Emission reduction objectives for 2008 of large combustion plants [ch 4, Large Combustion Plants].
- Emission reductions by third countries.
- Development of transport emissions.
- International regulations concerning ship and aircraft emissions.
- Developments in agriculture (livestock projections and emission reduction methods).
- Assessment of exceedances of critical loads and the WHO's guideline values for ground level ozone.
- Proposed interim objective for reducing soil eutrophication.
- New technical and scientific data including an assessment of uncertainties.
- Avoid excessive costs for any individual country.
- A comparison of model calculations for acidification, eutrophication and ground-level ozone with a view of improving models.
- Possible use of relevant economic instruments.

The Commission is required to report to the European Parliament and the Council in 2012 on compliance with the emission ceilings in Table 1 and on progress in relation to the interim environmental objectives.

The Commission must also carry out a review of this Directive in the preparation for each report. In the 2004 review the indicative emission ceilings (3,634 kilotonnes SO₂, 5,923 kilotonnes NO_x and 5,581 kilotonnes VOC) for the whole of the EU will be evaluated as well as the aim to achieve the interim environmental objectives for the EU. The reviews will also include further investigations of the estimated costs and benefits of national emission ceilings. The reports drawn up by the Commission can be accompanied by proposals for modifications of the national ceilings with the aim of meeting the interim environmental objectives and possible further emission reductions to meet the long-term objectives, as well as measures to ensure compliance with the ceilings.

By the end of 2002 (for international maritime traffic) and by the end of 2004 (for aircraft), the Commission shall report to the European Parliament and the Council on the extent to which emissions from these sources contribute to acidification, eutrophication and ground-level ozone.

The Directive encourages Member States to pursue cooperation with third countries and international organizations.

Table 1. National emission ceilings in kilotonnes for SO₂, NO_x, VOC and NH₃, to be attained by 2010.

Member State	SO ₂	NO _x	VOC	NH ₃
Austria	39	103	159	66
Belgium	99	176	139	74
Bulgaria	836	247	175	108
Cyprus	39	23	14	9
Czech Republic	265	286	220	80
Denmark	55	127	85	69
Estonia	100	60	49	29
Finland	110	170	130	31
France	375	810	1,050	780
Germany	520	1,051	995	550
Greece	523	344	261	73
Hungary	500	198	137	90
Ireland	42	65	55	116
Italy	475	990	1,159	419
Latvia	101	61	136	44
Lithuania	145	110	92	84
Luxembourg	4	11	9	7
Malta	9	8	12	3
Netherlands	50	260	185	128
Poland	1,397	879	800	468
Portugal	160	250	180	90
Romania	918	437	523	210
Slovakia	110	130	140	39
Slovenia	27	45	40	20
Spain	746	847	662	353
Sweden	67	148	241	57
United Kingdom	585	1,167	1,200	297
EU-27	8,297	9,003	8,848	4,294

Development of the Directive

The origins of the Directive were in the Commission's 1997 [acidification strategy](#) that included a future proposal on national emission ceilings as one of its principal elements. The Member States did not meet these early proposals with open arms. The United Kingdom Environment Minister, Michael Meacher warned that the suggested limits for nitrogen oxides would force the closure of all but two of the country's coal fired power stations. The Commission was consequently forced to refine the strategy using improved scientific data and modelling.

The Commission presented the Proposal for this Directive in June 1999. Because sulphur dioxide (SO₂), nitrogen oxides (NO_x), volatile organic compounds (VOC) and ammonia (NH₃) contribute in an interlinked manner to acidification, ground-level ozone and

eutrophication a joint approach was adopted by the Commission instead of addressing each problem individually.

The European Parliament adopted its report in March 2000 in its first reading but subjected it to several amendments. Two weeks later the Council had a further policy debate about the willingness of Ministers to go further than the Gothenburg Protocol (the [Gothenburg Protocol](#) as part of The Convention on long-range transboundary air pollution sets limits on these pollutants) in reducing emissions and also whether Member States were committed to the interim targets for ozone production. Even though several Ministers found the ceilings set by the Gothenburg Protocol insufficient other Ministers suggested keeping the ceilings agreed in the Protocol in order to adopt more ambitious ceilings during the revision of the Directive in 2004.

The Council's common position in November of the same year opted for less strict emission ceilings with the view that they are achievable and can be reviewed in 2004 when further information would be available.

The Netherlands expressed concern that the proposed national emission ceilings for nitrogen oxides are not strict enough to comply with the air quality limit values for nitrogen dioxide in the daughter Directive [1999/30/EC](#) of the Air quality framework Directive.

During the conciliation procedure the Parliament managed to include the specific benchmark date 2020 as the long-term goal of the Directive. The European Parliament adopted the text in its third reading on 20 September 2001.

Implementation of the Directive

National transposition measures for Directive 2001/81/EC can be found in the Member States' [national execution measures](#).

Links to all of the national programmes submitted by the Member States under the Directive can be found at this [link](#).

A study on the implementation of the Directive was carried out in 2005¹, in order to assist the Commission in the preparation of its review of the Directive (see below). The report looked at the national programmes prepared by Member States and the feasibility and opportunity of a ceiling for PM and methane.

The NEC Directive Status Report 2006² released by the European Environmental Agency (EEA) in 2007 showed, using 2006 data, that a number of Member States had succeeded in reducing their emissions below the level of the pollutant-specific emission ceilings specified in the Directive. Nevertheless reaching the NO_x emission ceiling seemed to be difficult for Member States. The projected NO_x emissions for the EU-25 were 8 per cent above the aggregated ceiling, and 11 Member States would not be able to meet the emission ceilings by 2010 if additional measures were not taken. Other targets were instead more likely to be met: NMVOC projections for the EU-25 are five per cent below an aggregated ceiling target; SO₂ projections are 39 per cent and NH₃ projections seven per cent below aggregated targets. It was also noted that some Member States submitted incomplete data inventories, and that the use of a more standardized approach may be needed. Among its recommendations, the report

suggested a need to require Member States to submit mandatory short informative inventory reports (IIR) to improve the transparency of reported data, and highlighted the importance of providing inventories in standardized form (as the NEC Directive does not currently specify a required reporting format).

In the 2007 Status Report³ the EEA portrayed a slightly more negative picture, with overall EU emissions projected to be nine per cent over the 2010 ceiling. Sixteen EU countries were likely to exceed national limits on emissions of at least one of the pollutants covered by the Directive. Limits on NO_x posed the greatest challenge, with 13 Member States predicting they will exceed their ceiling, due in part to higher-than-expected growth in road transport.

For the 2008 report⁴ for the first time all Member States submitted at least some of the emissions and projections data required by the Directive. Fourteen Member States anticipated they would meet all four of the pollutant-specific emission ceilings specified in the Directive with the remaining 13 Member States indicating they will miss at least one of their respective ceilings. Twelve Member States reported that they anticipate missing the NO_x ceiling, based on the reported 'with measures' projections. Four Member States (France, Poland, Portugal and Spain) indicated they will miss their NMVOC ceiling; two Member States (Germany and Spain) expected to miss their NH₃ ceiling and one Member State (the Netherlands) anticipated missing its SO₂ ceiling.

The 2009 report⁵ found that, as in 2008, fourteen Member States anticipated that they will meet all four of the pollutant-specific emission ceilings and 13 Member States indicated they would miss at least one of their respective ceilings. Eleven Member States reported that they anticipated missing the ceiling for NO_x, based on the reported 'with measures' projections. Three Member States (Austria, Portugal and Spain) indicated they will miss their NMVOC ceilings; three Member States (Germany, the Netherlands and Spain) expected to miss their NH₃ ceilings, and one Member State (Malta) anticipated missing its SO₂ ceiling.

The 2011 report⁶ analysed 2009 reported data. It concluded that 10 Member States would miss their 2010 emissions ceilings for NO_x, principally due to transport emissions. The Netherlands was predicted to exceed it by less than 5 per cent, while Germany, France and Austria were predicted to exceed it by 31 per cent, 34 per cent and 40 per cent respectively. Concerning emissions of sulphur dioxide, all Member States were on track to meet their national ceilings. For ammonia emissions, the Netherlands and Germany were likely to miss their targets. Finally, the report showed that for NMVOCs, Spain, Portugal, Germany and Denmark were likely to miss their ceilings.

The EEA released preliminary data in 2012 (available here: [link](#)) which analysed the 2010 reported data and, therefore, compliance with the deadline in the Directive. Nitrogen oxides were the pollutant for which most exceedances of national ceilings were found, with eleven Member States failing to respect the ceilings: Austria, Belgium, Denmark, France, Germany, Ireland, Luxembourg, Malta, Netherlands, Spain and Sweden. Concerning NMVOCs, Spain and Germany failed to meet their specific ceilings. For ammonia, Spain and Finland exceeded the limits. All Member States complied with the sulphur dioxide emissions limits.

Enforcement and court cases

There have been a number of cases concluded in the European Court of Justice concerning Directive 2001/81/EC. The following judgements concern the failure by Member States adequately to ensure transposition of the Directive:

- [C-146/04](#) 14/04/2005. This was a judgement against the Netherlands for inadequate transposition.
- [C-68/04](#) 02/06/2005. This was a judgement against Greece for inadequate transposition.

One case concerns the annulment of measures incompatible with the Directive:

- [T-233/04](#) 10/04/2008. This was a judgment of annulment of a Commission Decision of 24th June 2003, relating to State aid N 35/2003 concerning the emission trading scheme for nitrogen oxides notified by the Netherlands.

One case concerns a failure to apply the Directive:

- [C-273/08](#) 18/12/2008. This was a judgement against Luxembourg for the failure to draw up and communicate within the prescribed time-limit, the documents required in Articles 6, 7 and 8 of Directive.

Joined Cases [C-165/09 - C-167/09](#) 26.05.2011. A legal action was brought before the Netherlands' courts by NGOs contesting the granting of an installation permit under [IPPC](#) Directive for three new power stations. They argued that the, given that national emission ceilings under the NEC Directive were likely to be exceeded, the authorities should not have granted the permits, or should have at least inserted more stringent operation conditions. The case was sent to the ECJ for preliminary ruling on the interpretation of 'whether when granting an environmental permit for the construction and operation of an industrial installation, the competent national authorities are obliged to include among the conditions for grant of that permit the national emission ceilings for pollutants laid down by the NEC Directive.' The Court answered that authorities were not obliged to take the risk of exceeding the national emission ceilings into account. It is up to the Member State to adopt the appropriate suite of measures to meet the emission ceilings and it is not possible to argue against an individual decision on the basis that the overall suite of measures may not meet the legal obligations. Furthermore, the effectiveness or otherwise of the measures refers to a future obligation for compliance and it is not possible to challenge the decisions until, or if, non-compliance is reached according to the timetable in the Directive. The overall ceilings in the NEC Directive are, therefore, not equivalent to environmental quality standards in EU law (such as air limit values or water quality standards) which the IPPC Directive does require to be respected in permitting decisions.

Further developments

In 2007 the Commission started the preparatory work for a legislative proposal to revise the Directive. This revision will set emission ceilings to be respected by 2020 for the four already regulated pollutants and, most likely, will also regulate for the first time the primary emissions of PM_{2.5}. However, it does not intend to affect the national emission ceilings

already set for 2010. The revision will also build upon the evaluation and review of the National Programmes 2002 and 2006, the work performed under the Clean Air for Europe (CAFE) Programme, the Thematic Strategy on Air Pollution, legislative proposals on specific source categories (like Euro 5/6, € VI) and the revision of the IPPC Directive 2008/1/EC. The proposal was expected by summer 2007, then postponed to July 2008 to take into account the new energy baselines being developed in the context of the EU climate change and energy package, and has now again been delayed to at least 2011. According to green groups the delay has been due to the Commission's concern that the costs of implementation can particularly affect the newer Member States, which would have complicated the negotiations on the climate and energy package⁷.

Related legislation

Directive 2001/81/EC sets national emission ceilings for four major air pollutants. These pollutants arise from a very wide range of sources. Therefore, much of the legislation relating to industrial pollution and vehicle emissions is relevant to this Directive. Reducing overall emissions also contributes to meet air quality objectives locally and, therefore, such legislation is also relevant to Directive 2001/81/EC. Some of the more important related legislation is set out below:

- The Integrated Pollution Prevention and Control Directive [2008/1/EC](#).
- Large Combustion Plant Directive [2001/80/EC](#).
- Waste Incineration Directive [2000/76/EC](#).
- Solvent Emissions Directive [1999/13/EC](#).
- Directive [94/63/EC](#) on volatile organic compounds from petrol.
- Air Quality Framework Directive [2008/50/EC](#).

References

1 European Commission DG Environment (2005) *National Emission Ceilings Directive Review*, Task 1, Task 2, Task 3, Entec UK Limited.

2 European Environmental Agency (2007) *NEC Directive Status Report 2006*, EEA, Copenhagen.

3 European Environmental Agency (2008) *NEC Directive Status Report 2007*, EEA, Copenhagen.

4 European Environmental Agency (2009) *NEC Directive Status Report 2008*, EEA, Copenhagen.

5 European Environmental Agency (2010) [NEC Directive Status Report 2009](#), EEA, Copenhagen.

6 European Environment Agency (2011) [NEC Directive Status Report 2010](#), EEA, Copenhagen.

7 ENDS Europe (2008) *Revised National Air Pollutant Caps in EU Limbo*, 22 July 2008.