

Emissions from stationary sources: Regulations

The present document provides an entry to regulations on emissions from stationary sources. First, an overall entry for EU regulations, then an overview for the USA.

Note the section with **References** at the bottom of the document.

Note also that there are companion documents in the current database with emission limit values.

Regulation in the EU

For the EU, emissions from industrial sources are regulated in a number of directives which can be accessed through the page <http://europa.eu.int/comm/environment/air/legis.htm>

For some industrial sources there is a requirement to take into account BAT Reference Documents. These are available from the European Integrated Pollution Prevention and Control Bureau. An overview of all BAT Reference Documents is given on the page

<http://eippcb.jrc.es/pages/FActivities.htm>

[See next page for regulation in the USA...]

Regulation in the USA

An overview of US regulations on emissions from stationary sources is provided in the table below.

The legislation is grouped under the following headings:

- Electric generating plants
- Regional and state-level emission regulation
- Industrial sources of emissions
- Other sources

EMISSIONS FROM STATIONARY SOURCES (mainly point sources)			
Legislation (in chronological order within sections)	Deadline for implementation of specific measures	Specific measures	Atmospheric pollutant addressed
ELECTRIC GENERATING PLANTS			
Acid Rain Program, Title IV of the US Clean Air Act Amendments of 1990, 40 Code of Federal Regulations (CFR) 72-78, 15 November 1990	SO ₂ Phase I: 1 January 1995	The goal of Title IV is to reduce SO ₂ emissions by 10 million tons below 1980 levels by 2000. Also establishes a goal of a 2 million ton reduction in NO _x emissions by 2000.	SO ₂ NO _x
	SO ₂ Phase II: 1 January 2000	Phase I: Requires 263 units at 110 large, mostly coal-burning electric utility plants located in 21 Eastern and Midwestern States to meet SO ₂ emission limits, as detailed in Section 404.	
	NO _x Reduction Program first stage: 1 January 1996	Phase II: SO ₂ emission limits on Phase I units tightened as detailed in Section 405, also required smaller, cleaner electric generating plants fired by coal, oil, and gas above 25 megawatts and all new utility units to meet emission limits.	
	NO _x Reduction Program second stage: 1 January 2000	Limits for affected units set by allocating SO ₂ emission credits to each unit based on historical emission levels. Units allowed to meet limits by trading of emission credits. Two-stage NO _x Reduction Program requires coal-fired electric utility boilers to meet NO _x emission rate limits for specific boiler categories in each stage. Overall NO _x emission levels not capped; emission allowance allocation and trading system not employed	

REGIONAL AND STATE-LEVEL EMISSION REGULATION			
<p>NOx SIP Call of 24 September 1998, 40 Code of Federal Regulations (CFR) 51, 72, 75, and 96, under Section 110 of the Clean Air Act</p>	<p>22 regulated States plus the District of Columbia submit implementation plans to US EPA: September 1999 and May 2000</p> <p>States put controls for NOx emissions in place: May 2003</p> <p>States meet the overall NOx emission limit: September 2007</p>	<p>Requires regulated States to develop State Implementation Plans (SIPs) for reducing NO_x emissions. Goal is to reduce regional transport of NO_x from Midwestern States that may contribute to nonattainment of ozone limits in Eastern States.</p> <p>Each State allocated a NO_x emissions overall limit, or “budget,” based on emission levels that can be expected to be achieved by the implementation of reasonable, cost-effective measures.</p> <p>Rule does not prescribe how states may achieve their limits or which sources should be regulated. Allows trading of emission credits between emission sources in the regulated area.</p>	<p>NO_x</p>
<p>National Ambient Air Quality Standards (NAAQS) under the Clean Air Act Amendments of 1990 and attainment and area nonattainment designation</p>		<p>Requires EPA to set National Ambient Air Quality Standards (NAAQS) for each of six principal “criteria” pollutants. Primary standards set atmospheric concentration limits to protect public health; secondary standards set limits to protect public welfare (e.g., decreased visibility, damage to animals, crops and buildings).</p> <p>Allows EPA to subject areas where levels of a given pollutant exceed the NAAQS standard to a formal rule-making process which designates the area as “nonattainment.”</p> <p>Nonattainment classifications may be used to specify deadlines for meeting the standard(s) and the air pollution reduction measures an area must adopt. Typically requires installation of Best Available Control Technology (BACT).</p>	<p>SO₂</p> <p>Ozone</p> <p>PM₁₀, PM_{2.5}</p> <p>CO</p> <p>NO₂</p> <p>Lead</p>
INDUSTRIAL SOURCES OF EMISSIONS			
<p>New Source Performance Standards (NSPS) on the regulation of emissions from various types of industrial facilities, 40 Code of Federal Regulations (CFR) 60</p> <p>(see Reference list for Web reference to the regulations)</p>		<p>Sets uniform national emissions standards for over 60 source categories, including fossil-fired steam generator, utility generators, municipal waste combustors, cement plants, and others. Emission standards are specific to each industry.</p> <p>All industries subject to NSPS must meet certain general requirements for monitoring (40 CFR 60.13) and record keeping (40 CFR 60.7). Certain additional requirements apply to specific industries subject to NSPS.</p> <p>Requires installation of Best Available Control Technology (BACT) during construction phase.</p>	<p>SO₂</p> <p>NO_x and other nitrogen compounds</p> <p>PM</p> <p>Fluorides</p> <p>CO</p> <p>VOCs (volatile organic compounds)</p> <p>Visible emissions</p> <p>Metals</p> <p>Various industry-specific emissions (acid gases, metals, organic emissions)</p>

OTHER SOURCES			
New Source Review (NSR) permitting program of the Clean Air Act Amendments of 1977		<p>Requires stationary sources of air pollution (e.g., power plants, industrial facilities) to obtain emission permits prior to modifying existing facilities or beginning construction of new ones to limit any resulting pollution impacts.</p> <p>Requires one of the following NSR permit types:</p> <ul style="list-style-type: none"> • Prevention of Significant Deterioration (PSD) permits for major sources requiring installation of Best Available Control Technology (BACT) and air quality and emission impact analysis in areas where the source is in attainment with National Ambient Air Quality Standards (NAAQS) • Nonattainment NSR permits for major sources requiring installation of the Lowest Achievable Emission Rate (LAER) and the offsetting of the emissions increase from the modification in NAAQS nonattainment areas • Minor NSR for sources not in the above categories 	<p>SO₂</p> <p>PM</p> <p>Various other pollutants</p>

References

- As noted above, **EU legislation** on emission standards is available through <http://europa.eu.int/comm/environment/air/legis.htm>
- The **US New Source Performance Standards (NSPS)** can be found in the Code of Federal Regulations at Title 40 (Protection of Environment), Part 60 (Standards of Performance for New Stationary Sources). You will find a very long list of emissions guidelines and compliance times for all NSPS-regulated sectors through the link: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=474f779beade290997e4611971d078f4&tpl=/ecfrbrowse/Title40/40cfr60_main_02.tpl
- A convenient high-level entry point to **all US regulations under Title 40, Protection of Environment** is the page http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?sid=474f779beade290997e4611971d078f4&c=ecfr&tpl=/ecfrbrowse/Title40/40tab_02.tpl
- <http://www.epa.gov/epahome/lawregs.htm> is an entry page to laws and regulations on the web site of the **US EPA**.