

**Protocol to the 1979 Convention on
Long-Range Transboundary Air Pollution
To Abate Acidification, Eutrophication
And Ground Level Ozone**

The Euromot Position in Brief

as of April 2003

Euromot is the **European Association of Internal Combustion Engine Manufacturers**.

We represent the leading manufacturers of internal combustion engines used in a broad range of nonroad and marine applications (construction, mining and material handling equipment, trucks and buses, agricultural and forestry equipment, commercial marine and seagoing vessels, workboats and pleasure boats, rail traction, lawn/garden and recreational equipment, power generation).

Euromot has been working for many years with international regulatory bodies, eg European Union, the UN Economic Commission for Europe (UN-ECE), the UN International Maritime Organizations (IMO) and the Central Commission for the Navigation on the Rhine (CCNR). In addition, we are seeking an open and fair dialogue with national governments to provide reliable know-how on advanced internal combustion engine technologies in general and, in particular, on the feasibility of environmental as well as cost-effective product regulations. To achieve a pro-active engagement of all stakeholders in international harmonisation of regulations affecting engines and equipment, we coordinate our activities worldwide with trade associations of the non-road and marine industry sector.

For further information about our Association please refer to our Annual Report 2001 or pay us a virtual visit at <http://www.euromot.org> – your bookmark for engine power worldwide.

Introductory Remark

This document is intended to briefly summarise the Euromot Position on the UN ECE Gothenburg protocol on NO_x limits for new stationary internal combustion engines. For the comprehensive Euromot Position see "Useful Links".

A. Stipulated limits are not according to the new trend to improve energy efficiency and usage of renewable energy in the spirit of the Kyoto Protocol.

- Stipulated NO_x limit for 4-stroke lean-burn spark ignition engines will increase the fuel consumption of the engine and decrease the temperature of the flue gas. Hence the consequences are:
 - a lower total energy efficiency of the CHP (Combined Heat and Power) plant
 - higher emissions of CO₂ and other unburned emission components (CO, VOC, etc.).
- Engines fired with renewable energy sources (such as bio-gas, bio-oils, etc.) have not been considered.
- No efficiency bonus is granted to the engine driven power plant, although a higher efficiency results in a lower fuel consumption and hence in a lower level of greenhouse gas emissions.

B. Stipulated limits are beyond the BAT (Best Available Technique) approach.

This should be compared to EU Directive 96/61/EC (IPPC), which includes combustion installations with a rated thermal input exceeding 50 MW. According to this directive, the balance between benefits and cost of action should be considered.

- New stationary engines are regulated from very small units (diesel engines > 5 MW_{th}, spark-ignition engines > 1 MW_{th}) with very strict limits regardless of plant size. Other stationary prime movers (such as boilers and single unit gas turbines) are regulated only for > 50 MW_{th} sizes. New stationary engines are thus unjustifiably discriminated.
- Tons per year are given at country level (Annex 2 of the Gothenburg Protocol), but there are no indications about the effect of engine emission limit values. The cost-effective environmental quality need driven approach, which takes into account local environmental conditions as seen in other international Guidelines/Rules such as in World Bank Guidelines is not followed.

C. The emission values for new stationary engines are technically and economically not sound.

- The required performance of a secondary cleaning equipment (such as SCR, ESP) is best described when the emission limit reference point is close to "actual conditions". This principle is used for other prime movers (e.g. oil/gas fired boilers and gas turbines). The given emission limit reference point of 5 vol-% O₂ in the Gothenburg Protocol is far from actual conditions for bigger stationary engines. A reference point of 15 vol-% O₂ is closer to reality. An emission reference point of 15 vol-% O₂ is also used for the engine driven plant in several legislations/Guidelines.

Useful Links

Euromot Position papers regarding UNECE Gothenburg Protocol and O₂ reference can be downloaded from our website as follows:

- "Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution To Abate Acidification, Eutrophication And Ground Level Ozone; The Euromot Position"
http://www.euromot.org/download/positions/stationary/Stationary_LRTAP_UNECE_oct02.pdf
- "Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution To Abate Acidification, Eutrophication And Ground Level Ozone; The Euromot Position - Technical Reasoning"
http://www.euromot.org/download/positions/stationary/Stationary_LRTAP_UNECE_oct02_annex.pdf
- "O₂ Reference Point In Exhaust Emission Legislation"
http://euromot.org/download/positions/stationary/Stationary_O2_Refpoint_oct02.pdf

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