



Draft 2b UIC Leaflet Environmental Specifications for New Rolling Stock

Executive Summary

Disclaimer

This summary of the draft UIC Leaflet Environmental Specifications for New Rolling Stock is an intermediate result of the UIC funded PROSPER (“Procedures for Rolling Stock Procurement with Environmental Requirements”) project. The leaflet will be discussed and further enhanced within the framework of a wide feedback process and will be submitted for adoption in autumn 2005.

Scope of the Leaflet

The UIC-leaflet *Environmental Specifications for New Rolling Stock* addresses all relevant aspects for the integration of environmental aspects into the procurement process. It is proposed as assistance in the procurement of rolling stock for passenger as well as freight transport to enhance the process for both setting up invitations to tender and evaluating tenders with regard to their environmental performance.

It is the aim of this leaflet to contribute to a harmonisation of environmental performance in the rail sector on a European and in the long-term global scale. By doing so the process of procurement is to become more efficient and new rolling stock with good environmental performance can be acquired more cost-effectively.

The core of the leaflet is a set of 19 specifications which cover the most important issues of environmental performance relevant for the procurement of new rolling stock. Please note that the leaflet is designed as a guidebook. It is thus not possible to demand for compliance “clause by clause”. Instead the content of the leaflet will have to be adapted to suit the existing procurement procedures, the economic needs and environmental priorities of each operator.

The status of this leaflet will be “recommended”.

Target Audience

This leaflet is aimed at users within the rail business who are involved in the procurement of new rolling stock, but who are not directly concerned with environmental aspects, as well as engineering and purchasing staff from manufacturers.

Key Environmental Areas for Railways

The most relevant environmental areas for railways at the moment are Energy Efficiency, Noise and Exhaust Emissions. Energy Efficiency has top priority for railways because cutting energy consumption strengthens the competitive position of railways compared with other modes of transport, helps to cut the Life Cycle Costs of railway operation and is in keeping with international agreements on climate protection, such as the Kyoto Protocol.

Noise and Exhaust Emissions are highly relevant for railways because legislation has or will come into force in the nearer future, further legislation and regulations are upcoming and because of public pressure in this two environmental fields.

The environmental area of Materials/Recycling/Waste has also become a priority over the last decade. Main efforts are directed at avoiding hazardous waste and improving vehicle recyclability. In keeping with the precautionary principle the aspect Electromagnetic Fields was integrated into the Environmental Guideline.

Economic effects

The complex interaction between environmental and economic performance of rolling stock is of vital interest for railways. The economic effects of concrete measures to improve the environmental performance mainly depend on the framework conditions of the relevant key area (legislation, regulations, policy, standards etc.) as well as the technologies used (technological potential, degree of innovation, maturity, availability, market size) and cover a wide range from being highly beneficial to highly cost intensive.

In order to ensure the competitive advantages of railways in comparison to other modes of transport the improvement of the environmental performance has to be done in a highly cost efficient way. To identify the best solutions a detailed assessment of the environmental and economic effects of the applicable technological options has to be carried out. It is highly recommendable to perform the assessments in close co-operation between manufacturers and operators.

In the leaflet a rough estimate of the economic effects of each specification is given. (↑ Going strongly up; ↗ Going up; → Staying equal; ↘ Going down; ↓ Going down strongly).

Important environmental legislation and legislation on EU public procurement

Presently in Europe the most important environmental legislation for the operation of railways exists on the EU level – namely the TSI Noise for high-speed and conventional railways, the EU directive on non-road mobile machinery and EU directives on dangerous substances and preparations.

EU legislation for procurement in the transport sector explicitly permits and encourages the integration of environmental issues in the award procedure. The directives apply also to all non-state enterprises operating in the field of transportation (e.g. awarding authorities, operators, leasing companies, etc.).

Integration of environmental aspects into the procurement process

The process of procurement of new rolling stock is characterised by many different requirements that have to be fulfilled and the large number of players that are involved. For an efficient integration of environmental aspects into the procurement process it is important to clarify and define the roles of the different players in the process and to know the interfaces and what information is needed at what stages in the process. An integration procedure will be proposed in the leaflet.

Environmental Specifications in Invitations to Tender

Environmental specifications are being used to assess the environmental performance of new rolling stock. In order to guarantee a maximum degree of

transparency and comparability as well as high acceptance the applied set of specifications is undergoing a harmonisation process within the railway sector.

1 Structuring and Prioritisation of environmental specifications

A pie-chart scheme with a set of specifications has been worked out to structure and prioritise the environmental specifications to be used in the tendering process. It differentiates between mandatory (pie-chart 1) and voluntary specifications (pie-charts 2 and 3) and divides the voluntary ones into two priority groups. The target values for the mandatory specifications are defined by legislation and therefore have to be met by any tenderer. Nevertheless compliance with applicable legislation is only the baseline and a better performance will yield better evaluation results. Good or even excellent performance for the specifications in the second pie-chart with priority 1 specifications can offer economic benefits in a LCC perspective.

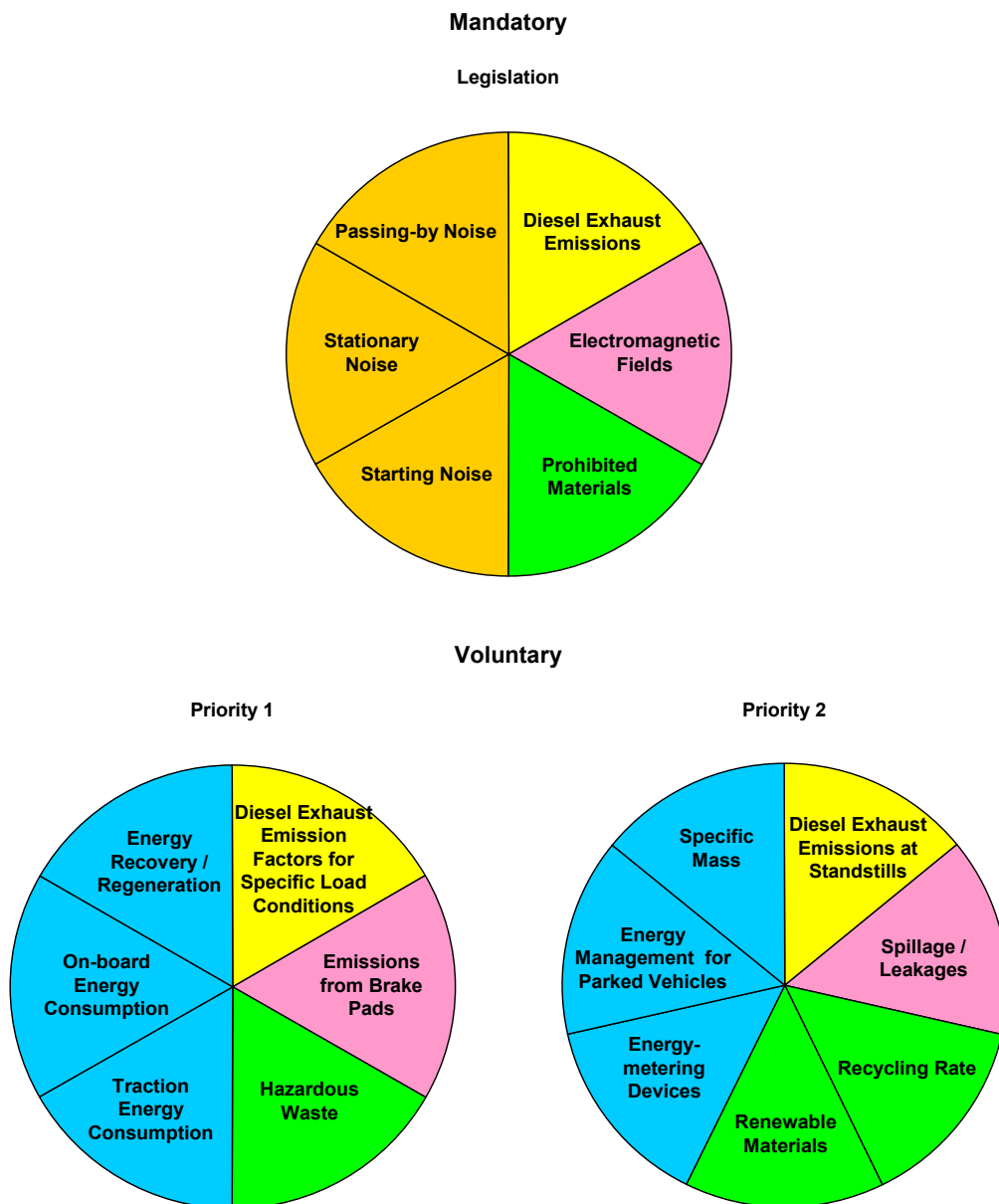


Figure 1: Pie-chart scheme with the set of environmental specifications



2 Strategy for the evaluation of environmental aspects in tenders

On the basis of the pie-chart scheme introduced above an approach for economic assessment a strategy for the evaluation of tenders with respect to environmental issues and their respective costs has been developed. The evaluation can be divided into the following phases: A – Compliance with legal standards, B – Compliance with other required standards, C – Evaluation of voluntary performance, D – Economic assessment, E – Integration of results.