



CER/EIM/UNIFE/UIP/EPTTOLA/UITP Position Paper

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Review of ecodesign and energy labelling requirements for lighting products



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Summary

The Community of European Railway and Infrastructure Companies (CER), the European Railway Infrastructure Managers (EIM), the Association of the European rail manufacturing industry (UNIFE), the International Union of Wagon Keepers (UIP), the European Passenger Train and Traction Operating Lessors' Association (EPTTOLA) and the International Association of Public Transport (UITP) – hereinafter referred to as “the European railway sector” - are fully committed to develop a sustainable and energy efficient railway system by deploying energy efficient measures and energy efficient products. However, the European railway sector is concerned about the envisaged ban of the placing on the market of fluorescent tube T8 lamps in the European Union by 2020 as such a short transition period is not consistent with the sustainability goals of the railway sector. The European railway sector fears that it would go against the intended energy savings and reduction of emissions while causing an important economic burden to the railway sector.

The fluorescent lamp T8 is widely used as the most common lighting system in European railway rolling stock and infrastructure (e.g. stations, terminals or workshops) and many other sectors. In order to meet the needed lighting performance, specific requirements and legal obligations when replacing T8 by LED, mechanical and/or modifications or even a complete replacement of the installation will be necessary before the end of its useful life cycle in many cases. This would result in reduced energy efficiency, increased consumption of resources and extra cost.

The European railway sector supports a ban of T8 lamps if the transition period is sufficient to allow for a replacement of the lighting installation at its end of life or for bringing them together with other modifications of the fixed installation or vehicles. Therefore, the European railway sector asks for postponing the ban until 2030.



1. Introduction

In the European railway system lighting is used extensively both in public areas like trains or stations as well as in non-public premises like workshops. Lighting is required to ensure safety and security for customers and for safe operation of the overall railway system. Typically, the installations are large-area and often not easily accessible, e.g. well elevated in large halls. They are designed and built

- to fulfil the different general and railway specific legal obligations;
- to fulfil quality criteria in order to serve its intended purpose for customers and staff;
- for low life cycle cost, i.e. for long use and minimised need for access and maintenance.

Energy efficiency is becoming more and more important and in particular, the European railway undertakings and infrastructure managers have already started to install LED lighting in new projects in order to save energy. Fully LED equipped new trains and LED installations on station platforms showcase the efforts already made by the European railway sector. However, the majority of the existing installations is still equipped with T8 lamps.

2. Challenges for the European railway sector

Whereas the use of the more efficient LED technology becomes state of the art in new projects, there has to be a specific view on existing lighting installations based on fluorescent T8 tubes. There are millions of such lamps in use within the European railway sector.

The European railway sector disagrees with the European Commission´s view that suitable and proven LED replacements are already available. In most cases, it will not be possible to simply replace a T8 lamp by a LED tube. Modifications will be necessary in order to comply with the legal requirements, e.g. on luminous flux, light distribution, glare, heat management, electrical safety, photo biological safety. Either for technical or then economic reasons it may be necessary to replace the whole installation instead before the end of life of the complete installation.

Required conformity testing and approval of the modified or new installation will add to the already elevated cost.

Furthermore, the use of LED tubes as replacement for T8 lamps will also lead to higher maintenance cost as the usable life span of the currently available LED tubes for equal luminous flux is still only about 2/3 of the installed long life fluorescent lamps.

Another implication of a quick ban is the hampering of the energy efficiency goal if an overall energy consideration is made. This for the following reasons:

- The induced cost can lead to higher prices for transport services, which in its turn can result in a shift of transports of passengers, and goods to less energy efficient transport modes.



- The extra energy used as embodied energy and for accessing the site, mounting and disposal (scope 3 emissions) of the otherwise still useful installation will at least partially compensate the energy saving. Shorter life span of the LED tubes increases this effect.
- Short-term quick-win replacements by adaptive solutions will contribute less to energy efficiency, but protract the substitution with innovative energy efficient solutions for a long time.

The analogous consideration is valid with regard to resources and emissions:

- Modifications and replacements lead to disposal of waste (lamps, parts of installation) long before the designed end of life.
- It has to be expected that T8 lamps will be stocked for repairs in order to postpone the effects of the early ban. The total number of T8 lamps produced could be higher, with a risk that stocked lamps will be obsolete when the shift to LED then happens.
- If due to the quick ban, the substitution measures cannot be planned and executed together with other projects (refit, renewals), the additional CO₂ emissions have to be attributed to the ban and hence hamper the intended goals.

All these negative effects can be minimised if the modification or replacement of the lighting installation with T8 can be chosen with regard to the end of life of the installation or integrated in an overall building or rolling stock project and make use of economic and energetic synergies. As this is possible only for very few installations until 2020, the transition period should be prolonged until at least 2030.

3. Conclusions

- The European railway sector supports the ambitions to increase the energy efficiency of the lighting.
- The European railway sector supports a ban of T8 lamps if the transition period is sufficient to allow for a replacement of the lighting installation at its end of life or for bringing them together with other modifications of the fixed installation or vehicles.
- A quick ban of the T8 lamps will lead to the need for untimely replacement of the lighting installations. Due to the high number of installations concerned, the quick ban
 - is counterproductive to the sustainability goals of the European Union and the railway sector;
 - will lead to high substitution cost for the railway undertakings and infrastructure managers which weakens their competitiveness.
- Therefore, the European railway sector asks for a transition period until 2030 for existing installations.
- A more intensive standardisation of LED lamps and related modules would help to accelerate their introduction significantly.
- A market survey assessed by a formal EC Expert Group on the availability and maturity of lamps in about 5 years could help to identify the most suitable date for a ban.