



The Voice  
of European  
Railways



20<sup>th</sup> October 2008

Communication from the Commission to the Council  
and the European Parliament

Rail noise abatement measures addressing the  
existing fleet

POSITION PAPER

## 1. Background

The principles of the Communication are welcomed. The Commission recognised number of arguments put forward by the sector such as:

- Rail is generally considered one of the most environmentally friendly transport modes
- A possible modal shift from rail to road on corridors would lead to increasing environmental impacts, in particular greenhouse gas emissions as the specific CO<sub>2</sub> emissions of rail freight are significantly lower than those of road haulage. This would happen at a time when the Community is considering the opportunity to develop a rail freight oriented network.

### Central elements of the Communication on Noise:

The Communication is centred on *noise related track access charging* (TAC):

In a start-up stage, the Commission proposes to adopt a differentiated track-access charge with a bonus for quiet (new and retrofitted) wagons *on a voluntary basis*. The bonus will be paid by the infrastructure managers, who will receive compensation from the states. In this stage rail sector actors - including member states - are encouraged to start retrofitting programmes voluntarily (on the basis of the bonus-system) and make arrangements for bonus-malus schemes.

Afterwards, the Commission intends to propose legal requirements for the implementation of noise-differentiated track access charges in the course of the recast of directive 2001/14/EC.

As a final step the Commission recommends the introduction of *noise emission ceilings*, especially for 'hot spots' and evening/night, which should limit the average noise emissions on certain rail lines within a determined period of time.

The Commission assumes that retrofitting could be completed within three years, with priority for wagons with over 5 years lifetime left and over 10,000km/year (total volume being 370 000 wagons).

## 2. General

Environment targets and criteria should remain related to the overall noise reception inventory situation. Noise reduction is an important objective and an important contribution has to come from reducing the noise levels of freight wagons. However efforts requested from rail should be **proportionate compared**

to efforts requested from other transport modes. In this respect, the Communication appears to be looking at the noise issue from a mode specific, rather than cross modal perspective. It proposes rail-related measures without taking into account the opportunity to “trade off” between for instance rail and road transport, where a shift of market share to rail would increase rail noise, but deliver a greater reduction in road noise.

A consideration should also be given to the efforts requested from wagon owners (railway undertakings, wagon keepers) which are substantial and will have an impact on the company budgetary situation as well as on railfreight’s market conditions.

Because of the expenses that will be incurred for the retrofitting of brake blocks the competitiveness of rail compared to road could be jeopardised. An indication of the direct impact on various actors in the railway industry has been provided in the Impact Assessment Report<sup>1</sup>. Rail traffic could decrease as a consequence of price increases up to 0.4%.

### **3. Retrofitting with composite brake blocks**

- a) The communication lacks alternative scenarios for the case the LL-blocks will not be available, although it is properly noted that LL-blocks do not have a final homologation and there is also a cost impacts for retrofitting. A homologation of LL- blocks allowing a correct life cycle cost and produced by several suppliers is a prerequisite. If not, the cost of blocks, and so of retrofit would increase a lot, because of monopoly or duopoly situation. It must be stated that more than one provider of any type of homologated LL-blocks has to be available to be sure that the price will be competitive and that the blocks homologated could be replaced by each other homologated block without any subsequent adaptation.
- b) An alternative scenario with K-blocks should be considered in parallel (e.g. retrofitting a smaller percentage of the fleet, esp. those wagons with very high mileage). K-blocks should also allow acting in a short term and can thus speed up the retrofitting process. (In the period before the date of LL homologation any access to infrastructure in those Member States must be non-discriminatory and not limited to those operators which adopted K-blocks technology.) However equally as in the case of LL-block, the multi-provider principle must apply and K-blocks have to be unconditionally homologated.

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<sup>1</sup> Commission staff working document accompanying the Communication on Rail noise abatement measures addressing the existing fleet - Impact Assessment report - {COM(2008) 432}.

- c) **After complete homologation of LL-blocks, this technology should be used** since life cycle costs of this technology are expected to be lower compared to K-blocks. A retrofitting of freight wagons in large volume is not realistic without availability of homologated LL-blocks. It remains however in the entrepreneurial freedom of an individual railway undertaking to decide which available technical solution is best for its specific purpose and circumstances.
- d) **No mandatory legislation about retrofitting must occur prior to the LL-block homologation**, not only for standard wagons with wheels with a diameter equal or larger than 920 mm, but also for all other types of wagons (very heavily loaded wagons at more than 20 t/axle, wagons with a low tare, wagons with small wheels ...), because it would cost the sector up to EURO 4 billion, while after the homologation of the LL-blocks (assuming it will be successful) the same results could be achieved at much more affordable costs (even considering a need to replace wheelsets during the retrofitting in a number of cases).
- e) Indeed, even in the case of LL-block homologation it **does not seem to be realistic to retrofit 370 000 wagons in a period of 3-4 years**. Manufacturers will likely not be able to adapt their production capacity accordingly. In addition, retrofitting in such a short period would further increase costs. Retrofitting should be carried out during regular inspections. This is also due to limited capacities of workshops. Thus, it would be more realistic to set the retrofitting schedule to 6 - 9 years.

#### **4. Direct public funding**

The Communication indicates that State Aid can also be used under the Community guidelines on State Aid for railway undertakings, or under the Community guidelines on State Aid for environmental protection. Any kind of *direct public funding* should preferably go directly to wagon owners and has to respect the following basic principles:

- a) As a general rule, Member States programmes supporting the retrofitting of freight wagons are **the valid option to tackle the rail freight noise problem** which varies from country to country. In most cases the noise exposure is particularly high on busy corridors;
- b) The Community Guidelines on State Aid for Railway Undertakings 2008/C 184/07 explicitly recognise the general legal admissibility of State Aid for noise reduction investments in rolling stock and provide the necessary legal framework;

- c) Any kind of State Aid must be **granted in a non-discriminatory and transparent manner**; competitive distortions or threats thereof have to be avoided and appropriate measures have to be taken to exclude a risk of double funding;
- d) Aid measures must be **necessary and proportionate** to the intended objective and the distortion of competition which is inherent to aid must not jeopardise the general interest of the Community. The reduction of external costs and a modal shift to rail are recognized interests of the Community because rail transport generates lower external costs than other modes such as road transport.

In addition the possibility of EU-funding is to be further analysed and considered; such funding would accelerate the retrofitting process considerably. The minimum co-financing level should be 50 % (idem like TEN-T funding).

## 5. Introduction of noise-related track access charges (TACs)

The rail sector sees such an arrangement implicating considerable additional cost of equipment for data acquisition, of administrative handling, etc, burdening avoidably the cost of retrofitting itself.

The following considerations should therefore be taken into consideration as minimum requirements:

- a) **Infrastructure managers shall not be adversely impacted** by the implementation of noise related TACs. Any additional costs for IMs must be compensated by the Member States. This applies to the bonus provided by the IMs to RUs as well as to additional administrative costs (registry wagons, wagons mileage, identifying wagons, accounting, etc). However, in practice it might be **impossible to reorganise national long-term investment programmes** and the existing TAC schemes in the medium term<sup>2</sup>. In addition, it should be noted that whilst Member State governments might be obliged to compensate IMs for a loss under this scheme, they may (given public spending priorities) choose to *offset this with a withdrawal of funding from other areas* of an IM's activities.
- b) In the context of promoting the investment to be made for wagon retrofitting, decision-makers have to take into account that - to be effective - the noise-related TAC system will only function properly as an incentive if the **bonus covers a substantial part of all costs incurred**.

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<sup>2</sup> For instance, the U.K.'s Control Period 4 already contains the financial arrangements up until 2014.

- c) The Commission indicates that the TAF TSI application should be used to facilitate the calculation of charges for individual wagons and kilometres run by them. However, it does not currently specify this information, nor is it funded for such info to be provided. Slow implementation of TAF TSI might jeopardise the successful implementation of any noise related TAC scheme. Implementation of the noise related TAC system should thus not be made mandatory if it cannot be sufficiently facilitated by applications of automatic wagon tracking/tracing.
- d) The Commission seems to suggest a phased introduction of bonus-malus arrangements: With regard to the bonus system it *“would be necessary to provide the necessary economic incentives for the wagon owners to retrofit their wagons in the start up phase”*. After this, and in line with the polluter pays principle, a bonus-malus system would provide sufficient incentives. The rail sector agrees with an approach where the external noise costs are internalised into the charging system. To guarantee a “critical mass” of retrofitted wagons, the malus should however not be introduced before the end of the retrofitting period, and shall be economically reasonable. In addition, it should be noted that until external costs can be internalised in other modes (article 7.5 Dir 2001/14)<sup>3</sup>, infrastructure managers cannot generate revenues from the internalisation of external costs in their track access charging scheme.
- e) By introducing a noise related TAC system, the rail sector internalises its external noise costs. The same market based instrument - which should extend beyond noise only - should be introduced on a **harmonised and simultaneous basis, geographically as well as across modes**. Moreover an internalisation of noise effects through charging in the railway sector ahead of internalisation efforts in the other ground transport modes should be avoided.
- f) The introduction of noise-related TACs per individual wagon would produce **significant transaction costs**. A differentiated TAC system must therefore ensure that *administrative costs are as low as possible* - they shall be *easily implementable* and *not unfavourable for the railways*. A recording and analysis of the kilometre reading by infrastructure managers would mean additional annual costs for the system and the personnel, which may amount to several millions of Euros. Therefore any kind of automatic identification system has to be subject to an extended *ex-ante cost benefit analysis* and shall not lead to additional costs. The choice of the charging scheme cannot

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<sup>3</sup> The second paragraph of article 7.5 states that: “Charging of environmental costs which results in an increase in the overall revenue accruing to the infrastructure manager shall however be allowed only if such charging is applied at a comparable level to competing modes of transport”.

go without *international coordination*; therefore any voluntary commitments made hurriedly will not only be inefficient but also risky.

- g) Introducing noise-related TACs in some member states (and not in others) will possibly accentuate distortions between rail infrastructures and thus result in negative effects on rail freight corridor developments.

## 6. Noise emission ceilings

Noise emission ceilings (caps), with daily limits along railway lines, shall not be introduced at a stage of technological and financial needed steps; in particular as this will put additional constraints to the sometimes already “bottlenecked” rail infrastructure capacity. Indeed, following the introduction of noise emission ceilings, traffic could be restricted on certain lines, which is **contrary to the Commission’s ambition for a growing and freight-oriented network**. Railways’ operational and competitive situation is at stake and it should be kept in mind that noise emission ceilings might result in periodic operations limitations which would cause financial losses. **Overall noise reception targets are thus best maintained as basic references.**

## 7. Further involvement of stakeholders

The railway sector appreciates the intention to set up appropriate expert working groups to develop a model and guidance for the development of follow-up measures (including possible implementation of noise related TAC schemes). Since areas to be covered by these expert groups include the development of wagon classification systems, specification of identification systems, **harmonisation of charging schemes** and monitoring of and impacts of retrofitting, experts from sector organisations shall be invited to participate. Various issues still need to be spelled out before a supportable TAC scheme can possibly be proposed, such as:

- Calculation of the total charges along lines that cross noise-sensitive areas;
- Compatibility of the plans with current charging systems, where fees are imposed on whole trains, not on individual wagons;
- Scope of the Communication: it is not clearly understood that the Communication from the Commission is only freight wagons oriented. However it should be clearly stated that no legally mandatory requirements for passenger rolling stock should apply.

Europe-wide solutions are necessary to avoid the creation of new barriers for trans-national rail traffic.

Technological progress in finding solutions for low-noise (composite) brake blocks has to be systematically supported and made into a priority research topic at EU level; the European Commission should become more pro-active, as presently there are insufficient incentives for the rail supply industry in this domain.

## 8. Additional remarks

**An authorisation for placing in service** of retrofitted wagons shall not be required in the case of wagon modifications involving only changes of brake blocks (retrofitting with LL-blocks) - those should be exempt from any repetition of authorisation procedures.

The similar principle should apply in the case of K-blocks: the retrofitted wagons must not be subject to a complete new certification - an exemption from the current wording of 7.4.2 of the WAG TSI shall apply. This article actually states that wagons with new brakes due to be certified would also have to undergo certification of all other parts. However, in the case of a K-block brake retrofitting the certification must be limited to certain parts of the retrofitted brake system only.

The current TSI "Noise" for the conventional rail system is not applicable on EU 1520 mm system (Baltic countries) till 2010. As already mentioned in the ERA 1520 report, a measuring campaign to set up noise values/limits should take place there.

It should therefore be noted that **the proposed measures are not applicable on EU 1520 mm network:**

- 80 to 90% of the freight wagons operated there are from third countries
- The composite brake blocks are already used but due to other reasons than noise reduction;
- The wagon pool of EU 1520 mm (Baltic countries) makes up around 5% of the total pool of 1520 mm wagons. Retrofitting of EU wagons only will not bring expected results. Moreover the wagons can be operated for a long time away from their home country and repaired and maintained in other workshops.

Evaluations (including an economic one) and considerations of the measures related to infrastructure shall take place instead; they should be eligible for a financial support.