

POSITION PAPER

Revision of Directive 97/68/EC on emissions from non-road mobile machinery engines

Considerations on future emission requirements in the rail sector for the Impact Assessment

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COMMUNITY OF EUROPEAN RAILWAY AND INFRASTRUCTURE COMPANIES - COMMUNAUTÉ EUROPÉENNE DU RAIL ET DES COMPAGNIES D'INFRASTRUCTURE - GEMEINSCHAFT DER EUROPÄISCHEN BAHNEN UND INFRASTRUKTURGESELLSCHAFTEN



1. INTRODUCTION

The purpose of this paper is to share with the European Commission CER's view in respect to the state of play of the Revision of Directive 97/68/EC for non-road mobile machinery (NRMM) and the presentation of the structure of the Impact Assessment work, including underlying emission limit values in the rail sector.

2. CONSIDERATIONS ON FUTURE EMISSION REQUIREMENTS IN THE RAIL SECTOR

As a follow-up of the last GEME meeting on the 2nd of October 2013 and of the new information about some emissions thresholds used for the impact assessment of the revision of Directive 97/68/EC, CER makes public through this position paper its official beliefs and recommendations.

Option 2: Alignment with EPA regulation, in scope & limit values

CER fully supports the Commission's position of discarding rail from the alignment with the US regulation as there are so many differences related to markets and also in terms of test cycles, engine types and engine and vehicle type approvals. Furthermore, CER is of the opinion that option 1 is providing the best outcome until 2024 or at least a period of 10 years after the publication of new limits.

Option 3a: Further alignment with 'road sector ambition level' for most relevant emission sources

CER discovered during the meeting the new PM threshold of 0,015 g/kWh, for both railcars and locomotives. This limit is more stringent than the US one (even if they are based on different cycles), especially for locomotives. By setting a new limit coming into force in the next few years would slow down the modernisation of small shunters' fleets being currently carried out. Installing IIIB engines in such fleets would not comply with these new values anymore and would end up in have a negative impact on the environment.

Concerning PN values and considering the lack of public available data on this issue, CER has concerns regarding their feasibility in rail applications.. Moreover, the methodology to perform PN measurements should be clarified.

Option 3b: Further alignment with 'road sector ambition level' for most relevant emission sources

This option presents the same disadvantages as the previous one. Furthermore, the NO_x limit value seems absolutely unrealistic. The achievement of the objective set by Stage IIIB already required the use of Diesel Particulate Filter (DPF), which has been demonstrated to be very costly for maintenance. In addition, this option would lead in addition to the generalisation of Selective Catalytic Reduction (SCR) exhaust after treatment systems and the associated constraints of implementation on rail vehicles (space, axle weights, etc).

For SCR, additional urea tank is required and a rail specific urea distribution network over the continent should be established. SCR and its use of urea would generate growing complexity impacting reliability of the vehicle, which would have to deal with additional mass and would imply a reduction in performance or the number of seats on board and also the risk of ammonia generation on platforms with envisaged difficulties for obtaining the authorisation of placing in service (APIS) of such vehicles for safety reasons.

The split between the engines under Directive 97/68/EC and the vehicles under Directive 2008/57/EC is purely administrative as it has already been recognised by the European railway Agency Board in its position paper approved on 26 June 2012¹.

Option 4: Extended level of ambition through enhanced monitoring provisions

The current tests on Portable Emissions Measurement System (PEMS) are performed on a Non Road Transient Cycle (NRTC). CER would like to draw the Commission's attention to the fact that any transposition to Non Road Steady Cycle should be done carefully and requires a comprehensive study and relevant tests.

Even if In-Service Conformity (ISC) for railcars has not been studied yet, this orientation confirms our position to use F-Cycle for railcars (instead of C1), and to maintain the F-Cycle for locomotives. The homologation cycle should not be too different from real operating conditions, in order to avoid the risk to exceed the conformity factor when ISC will be implemented in the future.

3. RECOMMENDATIONS FOR THE FUTURE

The time objective seems to be very short if the entry into force takes place in the year 2020 after the adoption in year 2016. Year 2024 or ten years after the publication of new limits appears to be a more accurate date as the adoption by the Commission of its proposal is forecasted for end of March 2014.

CER welcomes a regulation that promotes green mobility and supports that the best way to achieve it is by keeping the values of stage IIIB. This would reduce the cost and thus speed up the renewal of the fleet. Cleaner-D recently exposed to DG ENTERPRISE that the environmental benefit would be better by keeping on fitting vehicles with IIIB engines between years 2020 and 2040 than introducing new limits compliant engines starting from 2020.

However, if it turns out that the choice is made to implement a new stage for rail, the Directive should allow the possibility to replace IIIB engines by IIIA engines, as well as IIIA by IIIA engines, to promote engine replacement and lower emissions of existing vehicles, which the directive currently does not incentivise.

As stated during the last GEME meeting on the 2nd of October 2013, CER raises the concern of not having any study for the replacement of pre IIIA engines by pre IIIA engines through a derogation process when the Impact Assessment report has been finalised, and just a few weeks before the Inter Service Consultation expected in December 2013 (entering in contradiction with "whereas (2)"² of Directive 2011/88/EU).

Disclaimer

¹ Abstract of this position paper : "7. *Interface with other EU policies*

ERA's main objective is to support the implementation of the interoperability, safety and drivers' licences legislation. However, the Agency has skills, knowledge and competencies that can help facilitate other EU policies that have an impact on the development of railways. Therefore, the Agency should be able to effectively interact in a structured way with other services of the Commission (such as DG Enterprises in relation with the NRMM directive), especially other agencies (such as the TEN-T Executive Agency)."

² "In order to ensure that the revised Directive is in line with Union standards for good air quality, and in the light of experience, scientific findings and available technologies, the Commission should, in the upcoming revision of Directive 97/68/EC **and subject to impact assessment**, consider: ...

- the possibility of authorising, under certain conditions, replacement engines that do not comply with Stage III A requirements for railcars and locomotives,"

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