

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

100th session

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Geneva, 9-13 May 2016

Item 6(b) of the provisional agenda

Support for Proposal for amendments to Annexes A and B of ADR:

ECE-TRANS-WP15-2016-07e (Germany)

Upper capacity limits for gaseous fuels

Transmitted by the representatives from NGV Global and AEGPL

Summary

Executive summary: The Working Party has adopted amendments to ADR allowing for the use of liquefied natural gas (LNG), compressed natural gas (CNG) and liquefied Petroleum Gas (LPG) as fuel for vehicles carrying dangerous goods.

At its ninety-ninth session in November 2015, the issue of how to determine required quantity limits for these alternative fuels remained unresolved. The discussion was postponed to the next session of WP.15.

Germany has proposed a quantity limit to sub-section 1.1.3.3 (a) of ADR, in which the alternative fuels carried on board are limited to a quantity equivalent to that of 1,500 litres of liquid fuel. (diesel)

The gaseous fuels industries represented by NGV Global and AEGPL support this approach.

Action to be taken: Discuss and amend the provisions on the use of LNG, CNG and LPG as fuel for vehicles regarding the limitation of the capacity in sub-section 1.1.3.2 (a) of ADR 2017.

Reference documents: ECE/TRANS/WP.15/2016/7 (Germany)
ECE/TRANS/WP.15/230, paragraphs 39 to 41 and Annex I,
ECE/TRANS/WP.15/2015/16 (AEGPL and NGV Global),
ECE/TRANS/WP.15/2015/17 (Germany), related informal documents: INF.15 and INF.23 (AEGPL and NGV Global), INF.24 (Secretariat)

The issue has been raised about gaseous fuel limits on trucks based on the 1500 litre limit for diesel. If the same volumetric capacity were applied to the gaseous fuels in their various forms it would be extremely detrimental to the achievable range of the vehicle, with the energy equivalences for the gaseous fuels at a severe disadvantage relative to an equivalent volume of diesel: LNG at 50% of diesel; CNG at 26% of diesel; and LPG at 57% of diesel.

The gaseous fuel industries themselves as well as Contracting Parties worldwide have various methods of calculating fuel on board, measuring the fuels, as well as displaying

them for sale at fuelling stations. Some are measured and displayed in mass (kg) or volume (litre) and some are measured and expressed in energy equivalences, such as a diesel litre equivalent or Nm³.

Germany has proposed in its Working Document **1.1.3.2 (a)**

8. Subsection 1.1.3.2 (a) could be amended as follows (new text underlined):

“1.1.3.2 Exemptions related to the carriage of gases

The total capacity of the fixed tanks shall not exceed the amount of energy (MJ) or mass (KG) corresponding to the fuel limits of 1.1.3.3 (a) ADR.

In fact, the language proposed by Germany is an excellent solution for the natural gas and LPG fuel stakeholders and Contracting Parties by providing flexibility in terms of calculating fuel on board with an agreeable limit of equivalency to diesel that still can provide adequate range for gaseous fuel vehicles. The proposed German solution suits the different fuels as a measure of accuracy that also can be incorporated into equivalent quantities of energy or mass for sale to consumers. (We also agree with using the energy equivalencies established by Directive 2009/33/EC.) As such, the two associations fully support this solution with thanks to Germany for providing very reasonable flexibility for determining gaseous fuel quantities and limits on board vehicles.
