

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

15 March 2023

Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods

Bern, 20-24 March 2023

Item 5 (b) of the provisional agenda:

**Proposals for amendments to RID/ADR/ADN:
new proposals**

Revised definition of LPG (Liquefied Petroleum Gas)

Transmitted by Liquid Gas Europe

Introduction

1. At the Joint Meeting in September 2022, Liquid Gas Europe presented informal document INF.11 which outlined a provisional request for the RID/ADR/ADN to be amended to remove the reference to ‘Petroleum’ when describing LPG (because its source may be petroleum, but it may also be from natural gas or from bio/renewable/recycled feedstocks) and to incorporate into the definition of LPG, the possibility that the LPG may include, an as-yet-to-be-defined, percentage of DME (dimethyl ether), i.e. XX%, by mass, which we expect to be in the range of 10 to 20 %.

Approach

2. It was our intention to submit an official document for the spring 2023 meeting, however with an overriding requirement for safety at all stages, we are proceeding diligently, and with caution, as we seek to determine the safe percentage of DME that can be added to LPG for the blend to be able to be used as a drop-in product, replacing conventional LPG without any negative impact on safety. This process is taking slightly longer than we originally predicted. Whilst our multiple work stream has carefully identified, assessed and defined strategies for risk mitigation, (this process is being assessed by independent, third-party experts) we still await the results of some of the empirical testing, before we can confidently define the percentage of DME that can be safely incorporated into the specification for LPG.

3. At the November – December 2022 session of the Sub-Committee of Experts on the Transportation of Dangerous Goods, Liquid Gas Europe, in conjunction with the World LPG Association, presented document ST/SGAC.10/C.3/2022/53 and informal document INF.23. INF.23 outlined the industry’s desire to enable the incorporation of an as-yet-to-be-defined percentage of DME into the specification for LPG, as previously described. The Sub-Committee’s response to this request was recorded (para. 23 of the report) as follows:

“23. The Sub-Committee noted the information in document ST/SGAC.10/C.3/2022/53 and informal document INF.23. It welcomed the initiative of the liquefied petroleum gas industry to offer, in the context of circular economy and the sustainable use of natural resources, a solution to reduce the overall carbon footprint. On the options proposed in both documents, most of the experts who spoke preferred to go forward with the introduction of a new special provision. It was agreed that more research and data was needed on the percentage of dimethyl ether (DME) blended with liquefied petroleum gas, including the results on the compatibility of DME with material used for tanks, cylinders and their sealings.”

Next steps

4. It is our current expectation that we will submit a formal paper with the defined DME percentage and supporting documentation, for the September 2023 Joint Meeting.