

Economic Commission for Europe

Inland Transport Committee

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Working Party on the Transport of Perishable Foodstuffs

English

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Item 5 (a) of the provisional agenda

Proposals of amendments to ATP:**pending proposals**

Comments on proposal ECE/TRANS/WP.11/2020/1/Rev.2**Transmitted by the Government of Germany****Introduction**

1. Over its many years of development, the ATP Agreement has been restricted to verifying equipment and thermal appliances with regard to the insulation values and the required refrigerating, air and heating capacity in the respective targeted ATP class for the international carriage of perishable foodstuffs.
2. With regard to the introduction of alternative drivetrain systems, we suggest that WP.11 discuss whether and, if so in what form, the size of the energy reservoir as well as possibilities, if any, for recharging while the vehicle is in motion, e.g. by axle generators, should be regulated in the ATP Agreement in the future.
3. The introduction of a general quantitative assessment of the new electric energy reservoir by amending the definition of the independence/dependence of a thermal appliance as set out in Annex 1 Appendix 4 does not ensure temperature stability of the perishable foodstuffs carried. The X mark from 1972 was introduced so that refrigerated transports marked as such could be prioritized at the borders.
4. The currently applicable definition of independence/dependence of a thermal appliance in Annex 1 Appendix 4 is unambiguous and can be applied as such also to electric thermal appliances fitted to electric and hybrid vehicles (see Proposal 1).
5. Due to the transformation of the energy system, combustion engines operated with fossil fuels as an energy source for the thermal appliance will be increasingly replaced with purely electric engines. Purely electrically powered appliances are nothing new and were launched on the markets decades ago; the appliances, including their electric drives, have been tested since then by the testing stations in accordance with paragraphs 3.2 and 4.3 of Annex 1 Appendix 2 ATP (EN 16440-1:2015(E)).

Proposal 1: Amendment of the definition of independent or dependent electrically powered thermal appliances

6. A purely electrically powered thermal appliance is deemed to be independent if the device generating the electricity is part of the thermal appliance itself and can permanently generate energy independent of the vehicle/equipment, e.g. a battery set with a fuel cell or a generator with its own mechanical drive and/or tank.
7. In other cases, electrically powered thermal appliances are deemed dependent.

Proposal 2: Performing the ATP test of electric thermal appliances

8. For dependent thermal appliances, the ATP type test should be performed in mains operation, as already provided for in the current ATP text.
9. For both dependent and independent electrically powered thermal appliances, the ATP type test can be performed with only one energy source, i.e. in mains or battery operation, provided that the necessary power for the thermal appliance can be provided by all energy sources used.

Outlook on the future approval of refrigerated vehicles with fully electric/hybrid drivetrains

10. The wide-scale introduction of alternative drivetrains with electric and hybrid vehicles into the market is just beginning. The technological developments in the field of electrification have not yet been completed. The expansion of alternative fuels/charging stations to achieve universal coverage is yet in its infancy.
11. In the future, the increased use of advanced digital technologies for real-time routing linked with vehicle data, e.g. charging status, will provide further possibilities to ensure that temperatures can be maintained when carrying out refrigerated transport operations of the future. Here, the permanent availability of the energy source will become a basic prerequisite for refrigerated transport by the user.
12. Even today, energy efficiency and the matter of harmful emissions determine what technology is chosen for the thermal appliance and equipment.

Recommendation:

13. We believe that the classification of dependent and independent thermal appliances as currently set out in ATP and the procedure for the ATP type test can also be applied to electrically powered transport refrigeration units for electric and hybrid vehicles. We suggest that an informal working group of WP.11 be established to discuss whether and how an assessment of the electric reservoir might be incorporated into ATP.
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