

Transmitted by the chair of ELSA and the group of interested experts on REESS

Informal document **GRSP-52-05**
(52nd GRSP, 11 – 14 December 2012,
agenda item 18)

Status and progress report of ELSA and the group of interested experts on REESS (Rechargeable Energy Storage Systems) as well as updated ToR

The text reproduced below was submitted by the chair of ELSA and of the REESS group. It proposes the further procedure of the REESS group due to the work mandate of GRSP (ECE-TRANS-WP29-GRSP-51e, XVIII) by amending the terms of reference. The modifications of the existing ToR of the RESS group under B. of this document are marked in bold for new or strikethrough for deleted characters.

A. Informal Group of ELSA and Group of RESS

It was the mandate of ELSA to develop in general the electric safety requirements for “in-use” and “post-crash” under the 1958 and 1998 Agreement. In addition guidance was given on electric safety to HFCV GTR Subgroup Safety. In between electric safety requirements are established and incorporated in the GTR for hydrogen fuel cell vehicles. The mandate of the ELSA group expires by the end of 2012 and there is no need for extension when the REESS issue is solved.

Under ELSA the REESS group was installed. This group already established REESS requirements for category M and N vehicles. In a second step REESS requirements for the L category vehicles have to be developed. Therefore the REESS group should be installed as an informal group under GRSP with a mandate until the end of 2014. This would be also an advantage for EVS group in developing a GTR. Guidance could be given on electric safety items already tackled under the 1958 agreement by REESS experts.

In the 7th Meeting in October 2012 the REESS group amended the existing ToR as shown under B. of this document. Furthermore the group started to check whether the “in-use” requirements for M and N vehicles are also valid for vehicles of category L. Where it is not the case the discussion started how they have to be amended.

B. Terms of Reference for the group of interested experts on Rechargeable Energy Storage Systems (REESS)

1. INTRODUCTION

1.1 REESS requirements for vehicles of category M and N

GRSP agreed to set up a group of interested experts to establish legal requirements for Rechargeable Energy Storage Systems (REESS).

Therefore the World Forum agreed to extend the mandate of the Electric Safety informal group (ELSA) to cover these new activities through a group of interested experts, instead of establishing a new informal group under GRSG (s. report of 151th session WP.29 in June 2010, ECE/TRANS/WP.29/1085).

The informal group on Electric Safety (ELSA) deals with safety requirements under the 1998 Agreement. While it was agreed that the REESS component and system requirements are part of the Type Approval Process under the 1958 Agreement ELSA decided on its 8th meeting to start the business in a separate subgroup.

In a first step the group considered requirements for REESS in vehicles of categories M and N. In a second step the group may consider also requirements for REESS in vehicles of category L and development of a new global technical regulation (GTR) under the 1998 Agreement. **In between WP.29 agreed to install a new informal working group EVS. It is the assignment of the group to develop requirements regarding electric vehicle safety under the 1998 Agreement. Therefore development of a GTR is no longer a task of the REESS group.**

1.2 “In-use” and REESS requirements for vehicles of category L
GRSP decided in the May 2012 session to define “in-use” and REESS requirements for vehicles of category L. This has to be done by the REESS group under GRSP.

Therefore the group has to consider aligning the requirements of UN ECE regulation No. 100 to vehicles of category L.

2. OBJECTIVE OF THE PROPOSAL

2.1 OBJECTIVES REGARDING VEHICLES OF CATEGORY M and N

Ensure safety of rechargeable energy storage systems (REESS) which provide electric energy for electrical propulsion installed in vehicles of categories M and N during normal operation, unusual circumstances and post-crash.

For that purpose existing regulations if possible and practicable under 1958 agreement should be amended for REESS requirements concerning their functional, mechanical, chemical and electrical safety. Details of the issues to be tackled by the group are laid down in the annex 1.

An approach for approval of components and systems (e.g. ECE R 28) should be achieved. Existing regulations and standards (e.g. IEC, ISO) will be considered.

2.2 OBJECTIVES REGARDING VEHICLES OF CATEGORY L

Define the reasonable extension of the before mentioned requirements in paragraph 1.2 above to vehicles of category L, together with any new safety requirements whether the group treats it as necessary.

The work will be done in two steps:

In a first step the “in-use” requirements for vehicles of category L on the basis the existing requirements for categories M and N have to be defined.

In a second step the same has to be done for REESS requirements.

3. OPERATING PRINCIPLES

1. Participants to include Contracting Parties, Vehicle Manufacturers and Suppliers, Technical Services, Electric Safety Experts, etc.
2. The group will be chaired by Germany, secretary will be provided by OICA.
3. The official language of the group will be English.
4. All documents will be ~~submitted to the UNECE secretariat and~~ posted on the website <https://www2.unece.org/wiki/pages/viewpage.action?pageId=3178625> in advance of the meetings. The group may postpone discussing any item or proposal which has not been circulated 10 working days in advance of the scheduled meeting.

5. Proposals will be developed by consensus. When consensus cannot be reached, the chairman shall present the different points of view to GRSP. The chairman may seek guidance from GRSP as appropriate.
6. Sessions shall be held in agreement with the majority of the participants after the group has been established in a constitutional meeting.
7. A provisional agenda shall be drawn up by the secretariat in accordance with the participants of the group. The first item upon the provisional agenda for each session shall be the adoption of the agenda.
8. The second item on the provisional agenda will be the discussion, matters arising and adoption of the Minutes of the previous session.

4. WORK PLAN AND TIME SCHEDULE

November 2010	Constitutional meeting, ToR to GRSP (informal document)
December 2010	Adoption of ToR by GRSP
January 2011	Second meeting of the REESS group
March/April 2011	Third meeting of the REESS group
May 2011	Progress-Report to GRSP
June 2011	Fourth meeting of the REESS group
October 2011	Fifth meeting of the REESS group
January 2012	Sixth meeting of the REESS group
February 2012	Working Document to GRSP
Mai 2012	Adoption by GRSP
October 2012	Seventh meeting of the REESS group
November 2012	Adoption by WP.29
December 2012	Adoption of updated ToR by GRSP (informal document)
January 2013	Eighth meeting of REESS
March 2013	Adoption by WP.29 of updated ToR
May 2013	Ninth meeting of REESS
May 2013	Progress Report to GRSP
September 2013	Tenth meeting of REESS
December 2013	GRSP consider informal document of REESS group
January 2014	Eleventh meeting of REESS group
Mai 2014	GRSP approve working document of REESS group
November 2014	WP.29 vote for amendments of R 100

Annex 1

Candidate Requirements

- 1 Vibration
- 2 Thermal Shock
- 3 Humidity / Moisture Exposure
- 4 Mechanical Shock
- 5 Fire Resistance
- 6 External Short Circuit
- 7 Overcharge Protection (RESS or via vehicle system)
- 8 Over-discharge Protection
- 9 Over-temperature Protection
- 10 Protection against direct contact
- 11 Emission