

Transposition of Euro 6 requirements into
UNECE Regulation No. 83
&
Proposed amendments to R.101 and
R.103

GRPE 17-January 2013

Submitted by the expert of the
European Commission

Background

- Need to update UNECE Regulations (notably R.83) for « Euro 6 requirements »
- TRL/Ecorys supporting the EC with this task
- Dedicated workshops have been held and invitations have been sent to GRPE members
- First drafts of the texts have been submitted to 65th GRPE as informal documents
 - R.83, R.101 and R.103

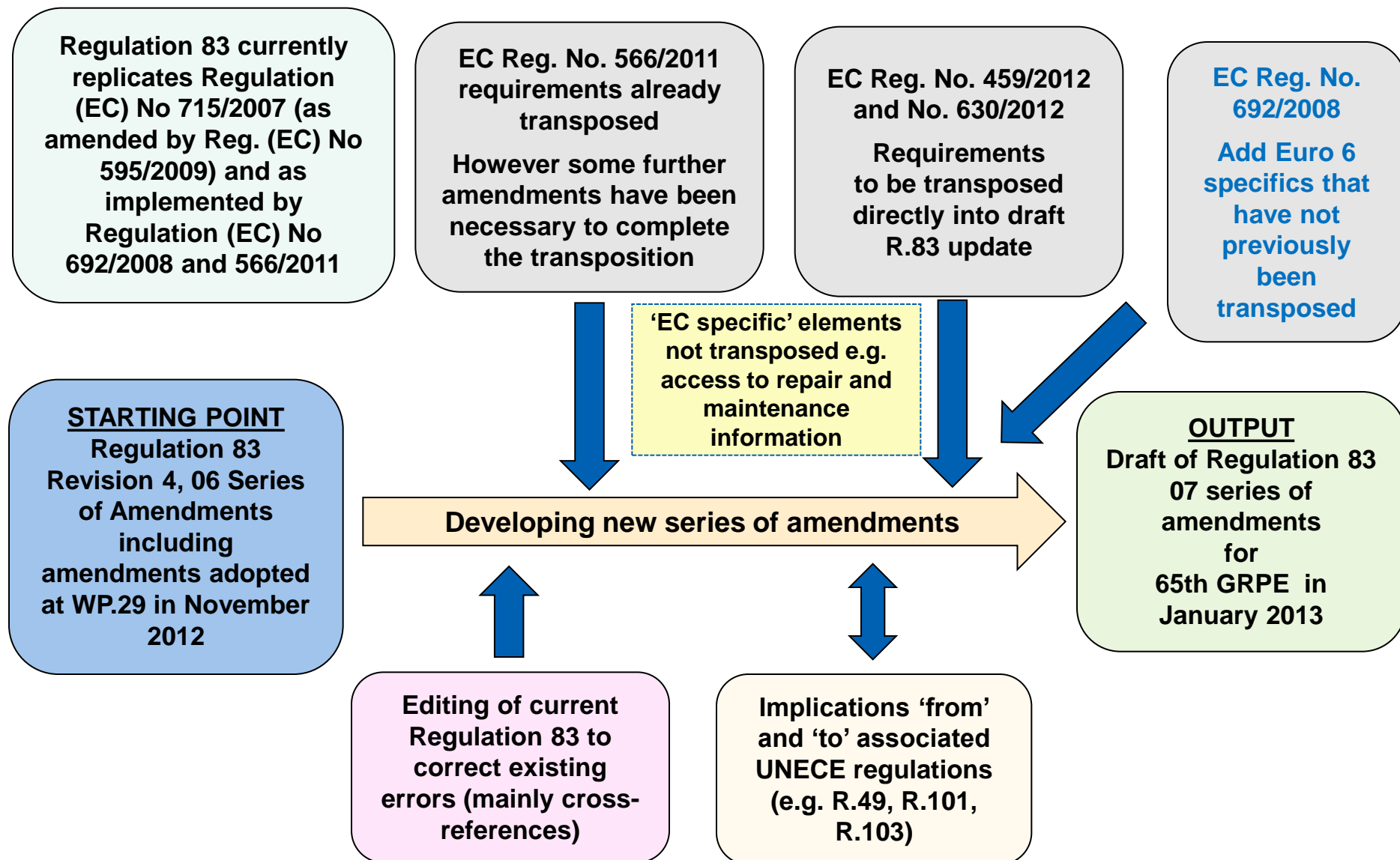
Scope

- **UNECE Regulation No. 83**
 - ...” Uniform provisions concerning the approval of vehicles with regard to the emission of pollutants according to engine fuel requirements”
- **EC Regulation No. 715/2007**
 - ... ” on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information”
 - Implemented by EC Regulation No.:
692/2008; 595/2009; 566/2011; 459/2012; and 630/2012

Regulation 83

- R.83 Revision 4, 06 series of amendments includes up to Euro 5 requirements
- Objective: new series of amendments only covering Euro 6 requirements
- Proposal: include requirements from amending regulation EC No. 459/2012
 - Euro 6 legislation
- Proposal: also include requirements from amending regulation EC No. 630/2012
 - vehicles fuelled by hydrogen and mixtures of hydrogen and natural gas with respect to emissions
- Proposal: add Euro 6 specific elements from 692/2008

Updating R.83: 07 series of amendments



Transitional provisions

- Euro 6 includes “phase-in” requirements on OBD-monitoring and particulates
- Proposal for R83-07 is to align with Euro 6 and include post 31/12/2013 stages as for EC Euro 6 (see table on next slide)
- R.83-07 replicates the EC transitional provisions in paragraph 12 (see Gantt chart, two slides on)

EC Euro 6 -“phase in”

Character	Emissions standard	OBD standard	Vehicle category and class	Engine	Implementation date: new types	Implementation date: new vehicles	Last date of registration
T	Euro 6b	Euro 6-plus IUPR	M, N ₁ class I	CI			31.8.2015
U	Euro 6b	Euro 6-plus IUPR	N ₁ class II	CI			31.8.2016
V	Euro 6b	Euro 6-plus IUPR	N ₁ class III, N ₂	CI			31.8.2016
W	Euro 6b	Euro 6-1	M, N ₁ class I	PI, CI	1.9.2014	1.9.2015	31.8.2018
X	Euro 6b	Euro 6-1	N ₁ class II	PI, CI	1.9.2015	1.9.2016	31.8.2019
Y	Euro 6b	Euro 6-1	N ₁ class III, N ₂	PI, CI	1.9.2015	1.9.2016	31.8.2019
ZA	Euro 6c	Euro 6-2	M, N ₁ class I	PI, CI	1.9.2017	1.9.2018	
ZB	Euro 6c	Euro 6-2	N ₁ class II	PI, CI	1.9.2018	1.9.2019	
ZC	Euro 6c	Euro 6-2	N ₁ class III, N ₂	PI, CI	1.9.2018	1.9.2019	

OBD standards

T, U and V covered by Interim OBD Threshold Limits (Compression ignition vehicles only)

W, X and Y covered by Preliminary OBD Threshold Limits

ZA, ZB and ZC covered by Final OBD Threshold Limits

EC Euro 6 - "phase in"

		2014					2015					2016					2017					2018					2019					2020																								
		Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov	Jan	Mar	May	Jul	Sep	Nov													
PI Euro 5b, Euro 5+	M, N ₁ -I	[New types]										[New vehicles]																																												
	N ₁ -II/III, N ₂	[New types]										[New vehicles]																																												
CI Euro 6b, Euro 6- +IUPR	M, N ₁ -I	[New types]										[New vehicles]																																												
	N ₁ -II/III, N ₂	[New types]										[New vehicles]																																												
PI, CI Euro 6b, Euro 6-1	M, N ₁ -I											[New types]					[New vehicles]																																							
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	N ₁ -II/III, N ₂																					[New types]					[New vehicles]					[New types]					[New vehicles]																			

Main changes to R.83

- Euro 6 emission limits added
- Euro 6 transitional provisions included for OBD threshold limits and particulates
- Requirements for Hydrogen and H2NG fuelled vehicles added
- Amendments to correct existing errors in R.83-06 (mainly in cross-references)

Outstanding issues

- Some cross-references need to be amended/confirmed
- Some technical queries to be confirmed
- Approval mark to be updated
- Clearer diagrams/figures to be obtained
- Minor editing and formatting required

“[Editorial note: xxx]” used in draft document to denote the outstanding issues

Implications for other UNECE Regulations

- Other UNECE Regulations reviewed to identify implications from updating R.83
- Regulation No. 49 – Emission of pollutants of heavy vehicles.

06 Series of Amendments, Annex 9A

“2.4. Alternative approval

2.4.1. Reserved¹⁴

¹⁴This paragraph has been reserved for future alternative approvals (e.g. transposition of Euro VI into Regulation 83)”

- Alternative R49 approvals using “Euro 6” Light Duty OBD and NOx control will need to be introduced after adoption of R83-07

Reg. No. 101 - Emissions of carbon dioxide and fuel consumption

- No Euro 6 specific new requirements
- Daytime running lamp requirements added (from EC No. 566/2011)
- Table of test requirements added (from EC No. 630/2012)
- Fuel consumption details amended to include hydrogen and H2NG (from EC No. 630/2012)
- Compressibility factors for gaseous fuels added (from EC No. 630/2012)
- Definitions updated (from EC No.630/2012)

Reg. No. 103 - Replacement of catalytic converters for power-driven vehicles

- No Euro 6 specific new requirements
- Editorial amendments to update cross-references to R.83 (Revision 4)
- Deterioration factors need to be updated (Based on R.83 Revision 4)

Timeline

- First draft of R83 07 series of amendments to 65th GRPE, January 2013
- If experts agree, preparation of formal R83-07 document for 66th GRPE in June 2013
- If adopted by 66th GRPE, submitted to WP.29 in November 2013
- Similar timelines for R.101 and R.103

Thank you for your attention

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