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## OPINION

*ERA/OPI/2025-4*

OF THE EUROPEAN UNION AGENCY FOR RAILWAYS

for

EUROPEAN COMMISSION

regarding

Testing specifications for ETCS Baseline 4 and for the definition of  
reduced envelope of specifications related to Commission  
Implementing Regulation (EU) 2023/1695

### Disclaimer:

The present document is a non-legally binding opinion of the European Union Agency for Railways. It does not represent the view of other EU institutions and bodies, and is without prejudice to the decision-making processes foreseen by the applicable EU legislation. Furthermore, a binding interpretation of EU law is the sole competence of the Court of Justice of the European Union.

## 1. General Context

The European Union Agency for Railways (hereinafter “the Agency” or “ERA”) received from the European Commission a request<sup>1</sup> for a technical opinion in accordance with Article 6 of Directive (EU) 2016/797.

The request addresses the use of indexes 37b, 37c, 37d and additionally index 31 of Appendix A Table A.2 and the availability of index 104 of Commission Implementing Regulation (EU) 2023/1695 on the technical specification for interoperability relating to the control-command and signalling subsystems (hereinafter “CCS TSI” or the “current CCS TSI” or “CCS TSI (EU) 2023/1695”).

## 2. Legal Background

Article 6 (1) Directive (EU) 2016/797 sets out that “If, after its adoption, it appears that a TSI has a deficiency, that TSI shall be amended in accordance with Article 5(11)”. Article 6 (2) Directive (EU) 2016/797 sets out that “Pending the review of a TSI, the Commission may request an opinion from the Agency.”

As requested the Agency’s opinion referred to shall constitute acceptable means of compliance and may therefore be used for the assessment of projects, pending the adoption of a revised TSI.

## 3. Analysis

Commission Implementing Regulation (EU) 2023/1695 entered into force on the 28<sup>th</sup> September 2023. At the time of the final vote and publication on the Official Journal a set of documents listed in Appendix A Table A.2 were not available in their most updated version. These documents correspond to indexes

- 31; SUBSET-094; Functional requirements for an on-board reference test facility; 3.1.0
- 37b; SUBSET-076-5-2; Test cases related to features; 3.3.0
- 37c; SUBSET-076-6-3; Test sequences; 3.2.0
- 37d; SUBSET-076-7; Scope of the test specifications; 3.3.0
- 104; SUBSET-153; Exceptions for on-board reduced envelopes of system versions; Reserved

Index 104, defining the reduced envelopes for lower system versions that can be implemented using Baseline 4 Release 1 specifications, was neither available at the time of the publication of Regulation 2023/1695 and appears with the status “Reserved”.

Indexes 37b, 37c and 37d (the so-called SUBSET 076) and index 31, published in the Regulation 2023/1695, refer to the previous set of specifications based on Baseline 3 Release 2 documents, meaning that they are not fully compatible with the Baseline 4 Release 1 specifications. These documents were kept in Appendix A to cover the transition period set out in Appendix B. Accredited laboratories have since updated these documents to ensure compliance with Baseline 4 Release 1 and confirmed their readiness to perform testing accordingly.

The Agency has since then published Recommendation ERA1218-2 of the European Union Agency for Railways on the amendment of Commission Implementing Regulation (EU) 2023/1695 (CCS TSI) , which includes the released versions of the above mentioned documents:

- 31; SUBSET-094; Functional requirements for an on-board reference test facility; **4.0.0**
- 37b; SUBSET-076-5-2; Test cases related to features; **4.0.0**
- 37c; SUBSET-076-6-3; Test sequences; **4.0.0**
- 37d; SUBSET-076-7; Scope of the test specifications, **4.0.0**

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<sup>1</sup> Letter signed on 4/11/2025 from Brussels MOVE.DDG2.C/KS to the Executive Director of the Agency with reference Ares (2025)9461155

- 104; SUBSET-153; Exceptions for on-board reduced envelopes of system versions, **1.0.0**

#### 4. The opinion

On the basis of this analysis, the opinion of the Agency is that:

1. The test specification documents referenced in Indexes 37b, 37c and 37d (SUBSET 076), and the functional requirements for an on-board reference index 31 test facility (SUBSET-094) as published in Recommendation ERA1218-2 of the European Union Agency for Railways on the amendment of Commission Implementing Regulation (EU) 2023/1695 (CCS TSI), are available and shall be used as an acceptable means of compliance to fulfill Annex I §6.2.4.1 of Commission Implementing Regulation (EU) 2023/1695 (CCS TSI) for B4R1 ETCS on-board products, including those supporting a reduced envelope of system versions..
- Index 104, as published in Recommendation ERA1218-2 of the European Union Agency for Railways on the amendment of Commission Implementing Regulation (EU) 2023/1695 (CCS TSI), is available and shall be used as an acceptable means of compliance to design B4R1 ETCS on-board supporting reduced envelopes of system versions.
2. Appendix A Table A.2 shall be amended as published in Recommendation ERA1218-2 of the European Union Agency for Railways on the amendment of Commission Implementing Regulation (EU) 2023/1695

Index No	ETCS Baseline 4 Release 1; RMR: GSM-R Baseline 1 Maintenance Release 1 + FRMCS Baseline 0; ATO Baseline 1 Release 1			
	Reference	Name of Specification	Version	Notes
[...]				
31	SUBSET-094	Functional requirements for an on-board reference test facility	4.0.0	
[...]				
37b	SUBSET-076-5-2	Test cases related to features	4.0.0	
37c	SUBSET-076-6-3	Test sequences	4.0.0	
37d	SUBSET-076-7	Scope of the test specifications	4.0.0	
[...]				
104	SUBSET-153	ERTMS/ETCS & ERTMS/ATO Exceptions for on-board reduced envelopes of ETCS system versions	1.0.0	

Valenciennes,

Oana Gherghinescu  
Executive Director

## ANNEX 1

### Impact Note

# Testing specifications for ETCS Baseline 4 and for the definition of reduced envelope of specifications related to Commission Implementing Regulation (EU) 2023/1695 of 10 August 2023

Issued as per Art. 8(1) of Regulation (EU) 2016/796 and the Impact Assessment procedure adopted by the ERA Management Board (Decision n.290, 16/03/2022)

<b>1. Context and assessment of impacts</b>			
<b>1.1. Scope</b>			
<p>The European Commission has requested the Agency (see annex I) to issue Technical Opinions to include as acceptable means of compliance the use of indexes 31, 37b, 37, 37d and 104 for testing CCS products.</p> <p>ERA recommended amendments to the CCS TSI, formalised in Recommendation ERA1218-2, published on December 19, 2024. The impact assessment of the recommendation applies to this specific technical opinion too since it was covered by CR649 (Missing SS-153), CR651 (SS-076 and SS-094).</p>			
<b>1.2. Assessment of impacts</b>			
<p>Impacts are considered acceptable. Discussed with the sector in the CCS WP Meeting #75. Also discussed in the ERTMS Notified Conformity Assessment Bodies network meeting #64.</p> <p>The modifications done to the CCS TSI contribute to clarify which set of documents could be used as acceptable means of compliance to cover the gap between the EU 2023/1695 and its amendment.</p>			
<b>1.3. Stakeholders affected</b>			
Railway undertakings (RU)	<input type="checkbox"/>	Member States (MS)	<input type="checkbox"/>
Infrastructure managers (IM)	<input type="checkbox"/>	Third Countries	<input type="checkbox"/>
Manufacturers	<input checked="" type="checkbox"/>	National safety authorities (NSA)	<input checked="" type="checkbox"/>
Keepers	<input type="checkbox"/>	European Commission (EC)	<input type="checkbox"/>
Entity Managing the Change (EMC)	<input type="checkbox"/>	European Union Agency for Railways (ERA)	<input checked="" type="checkbox"/>
Notified Bodies (NoBo)	<input checked="" type="checkbox"/>	Shippers	<input type="checkbox"/>
Associations	<input type="checkbox"/>	Other (Please specify) ...	<input type="checkbox"/>