RIS-2795-RST issue 2.3

Version:	6.00		
Purpose:	Approval to publish		
Authors:	Darren Fitzgerald – Principal Electrical & Systems RST Engineer		
Sponsor:	Mark Oakley – Professional Head of Rolling Stock		
Lead industry committee:	Rolling Stock Standards Committee (RST SC)	**Date:**	13 July 2023
Supporting industry committee:	Energy Standards Committee (ENE SC)	**Date:**	06 July 2023
Supporting industry committee:	Control Command and Signalling Standards Committee (CCS SC)	**Date:**	27 July 2023

Decision

Rolling Stock Standards Committee (RST SC) is asked to:

APPROVE the document for publication

In approving the document for publication the SC has:

DECIDED that the change has limited impact and consultation can be undertaken by the committee members within the committee meeting.

APPROVED the revision of RIS-2795-RST for publication.

Energy Standards Committee (ENE SC) is asked to:

SUPPORT the document for publication

In supporting the document for publication the SC has:

SUPPORTED the revision of RIS-2795-RST for publication.

Control Command and Signalling Standards Committee (CCS SC) is asked to:

SUPPORT the document for publication

In supporting the document for publication the SC has:

SUPPORTED the revision of RIS-2795-RST for publication.

RIS-2795-RST issue 2.3

This business case for change has been developed to support standards committees in taking decisions related to changes to standards, it includes an assessment of the predicted impacts arising from the change.

Proposed revised document

Number	Title	Issue
RIS-2795-RST	Track to Train RFID Compatibility	2.3

Proposed superseded document

Number	Title	Issue
RIS-2795-RST	Track to Train RFID Compatibility	2.2

Summary

Background and change

RIS-2795-RST issue 2.3 'Track to Train RFID Compatibility' sets out requirements for radio frequency identification (RFID) compatibility between the train and track, including the management of RFID application codes.

RIS-2795-RST issue 2.3 sets out a new application code for automatic power mode control (APMC), as requested by Transport for Wales (TfW) to enable the Wales and Borders core valley lines (CVL) to comply with RIS-2795-RST.

Application codes are set out for different vehicle functions, such as automatic selective door operation (ASDO) and automatic power change over (APCO). Setting out the new APMC function in RIS-2795-RST will help to reduce and eventually remove the proliferation and time and effort required to design bespoke applications, using the limited RFID data and message capacity that is available.

Industry impact due to changes

Impact areas	Scale of impact	Estimated value £ 000's
A. Legal compliance and assurance	Low	Not proportionate to quantify
B. Health, safety and security	Low	Not proportionate to quantify
C. Reliability and operational performance	N/A	-
D. Design and maintenance	N/A	-
E. People, process and systems	Neutral	Not proportionate to quantify
F. Environment and sustainability	N/A	-
G. Customer experience and industry reputation	N/A	-
Total value of industry opportunity =		-

The standards change contribution to the total value of industry opportunity				
☐ None or low	☑ Minor but useful	☐ Moderate	☐ Important / essential	☐ Urgent / critical

Detail

1. What are the objectives associated with this change?

Objective 1 – Allocate a new application code for Automatic Power Mode Change (APMC) in RIS-2795-RST

1.1 Transport for Wales (TfW) submitted a proposal which identified the need for the inclusion of a new APMC application code for RFID beacons in RIS-2795-RST that will support the electrification of the Wales and Borders CVL. This is the process as defined in Part 5 of RIS-2795-RST issue 2.2.

1.2 CVL has a substantial number of unwired electrification sections and permanently earthed sections (PES). The proposal sets out a method to achieve compatibility between electrification infrastructure and rolling stock through the use of RFID beacons with an APMC application code. This will provide the vehicle with infrastructure condition data, such as when a train is approaching an unwired section or PES and will aid the driver to perform their role and reduce their workload.

2. How has the content in the standard changed to achieve the objectives?

Objective 1 – Allocate a new application code for Automatic Power Mode Change (APMC) in RIS-2795-RST

2.1 Existing requirements in RIS-2795-RST have not been affected by the introduction of requirements for APMC.

2.2 The allocation of application code 36 titled ‘Automatic Power Mode Control (APMC)’ in RIS-2795-RST provides a method to TfW of achieving technical compatibility between rolling stock and the infrastructure and gives industry provision to use the same application code on other routes in future projects.

3. How urgently does the change need to happen to achieve the objectives?

3.1 Although the impact of this revision is considered to be minor, it was necessary to introduce requirements for APMC into RIS-2795-RST to enable compatibility between electrification infrastructure and rolling stock on the CVL as soon as practicable to avoid TfW having to design a bespoke application using the limited RFID data and message capacity available.

4. What are the positive and negative impacts of implementing the change?

Justification of impact, scale and quantification for the seven impact areas

A. Legal compliance and assurance

4.1 Clauses 5.1.1 and 5.1.2 of RIS-2795-RST require that only application codes set out in RIS-2795-RST are to be used by industry in the programming of RFID beacons, and that the database of unique application codes is maintained by RSSB. By adding the new application code for APMC, TfW will be able to comply with existing requirements in RIS-2795-RST. However, this benefit is not proportionate to quantify.

B. Health, safety and security

4.2 Introducing a new application code for APMC has an associated safety benefit in helping to reduce the driver's workload where they have to read trackside signs to understand the locations of unwired section or PES and reduce the number of distractions experienced by the driver. However, this safety benefit is not proportionate to quantify.

C. Reliability and operation performance

4.3 Not applicable.

D. Design and maintenance

4.4 Not applicable.

E. People, process and systems

4.5 Introducing a new application code for APMC has an associated safety benefit in helping to reduce the driver's workload where they have to read trackside signs to understand the locations of unwired section or PES and reduce the number of distractions experienced by the driver. It also helps to achieve technical compatibility between rolling stock and the infrastructure and energy subsystems. However, this benefit is not proportionate to quantify.

F. Environment and sustainability

4.6 Not applicable.

G. Customer experience and industry reputation

4.7 Not applicable.

5. What is the contribution of this standards change in realising the value to industry opportunity?

5.1 Providing an application code for APMC will help industry achieve compatibility between rolling stock and other structural subsystems such as infrastructure or energy.

5.2 The APMC application code, once published, can be used by other railway undertakings and support technical compatibility on other routes.

6. What is the effort required by RSSB to make the change?

6.1 No project was necessary for the implementation of this change. A technical specialist from the rolling stock standards team led the change supported by policy specialists for their review and comment.

7. Can RSSB deliver against industry's expected timescales?

7.1 RSSB have achieved the delivery of this change according to the expectations of TfW for the RIS to be published in September 2023.

8. How will the industry implement the change?

8.1 The change will be implemented by permitting a new application code to be used in RFID beacons, initially on TfW CVL but also potentially on other routes in the future.

9. How will RSSB assess whether the change is achieving the objectives?

9.1 The revised RIS will be reviewed 12 months after publication to seek feedback on the use of the application code by TfW.

Appendix A Disposition Table

Table A1: RIS-2795-RST issue 2.2 to RIS-2795-RST issue 2.3

From RIS-2795-RST issue 2.2	To RIS-2795-RST issue 2.3	Way forward	Comments	Objective
Part 2 – Part 5	Part 2 – Part 5	No change	No comments	-
Appendix A, Table 1	Appendix A, Table 1	Revised	Updated to include the allocation of application code 36 to Automatic Power Mode Control (APMC)	1
Appendix B – Appendix C	Appendix B – Appendix C	No change	No comments	-
-	D.1	New	Introduction to the application code APMC	1
-	D.2	New	Reference to clauses B.1.3 to B.1.5 which are also applicable to APMC.	1
-	D.3	New	Guidance on the number of unused bits in the application code.	1
-	D.4	New	Guidance on the purpose of beacon data	1
-	D.5	New	Reference to figure 7 for the data structure of the application code	1
-	Figure 7	New	APMC application code data structure	1
-	Table 3	New	APMC function code table	1
Definitions	Definitions	Redrafted	To include APMC	1
References	References	Redrafted	Removal of withdrawn reference and the inclusion of the publication year to two standards	