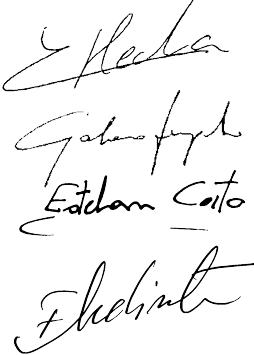

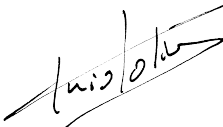


Moving Europe towards a sustainable and safe railway system without frontiers.

## Clarification note

### *Notification of fixed installations national rules related to trackside CCS, INF and ENE subsystems*

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*The purpose of this document is to provide applicants and other external stakeholders with information in regard to the specific topic referenced in the title. The present document is a non-legally binding guidance of the European Union Agency for Railways. It 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. Description of the issue

The objective of this note is to clarify the requirements that the Agency will consider when deciding to accept the notification of, and/or the assessment the content of “national rules” (as defined by the Directive (EU) 2016/797 (IOD)) in addition/or as an alternative to the harmonised requirements defined in the following Technical Specifications for Interoperability (TSI) : :

- *TSI CCS (trackside subsystem)*
- *TSI INF*
- *TSI ENE*
- *TSI PRM (aspects related to INF subsystem)*
- *TSI SRT (aspects related to INF and ENE subsystems)*

The main objectives of the rule notification are :

- Identification of the interoperability requirements **in addition to the requirements of fixed installation TSIs mentioned above;**
- Ensure effective **transparency of national rules in force**: common reference for all actors and avoid overlap with TSIs.
- Identify potential TSI deficiencies, new specific cases...

The European Union Agency for Railways (‘ERA’ or the ‘Agency’) has the obligation to examine the national rules (including draft national rules) notified by the Member State (MS) in accordance with Article 25 and 26 of Regulation 2016/796.

This document does not describe how to upload the rules in the IT Tool Single Rule Database (SRD) but provides the necessary information for the identification of rules and the approach that the Agency will follow.

One of the main objectives of the Directive (EU) 2016/797 on the interoperability of the rail system within the EU is to establish the conditions to be met to achieve interoperability within the Union rail system in a manner compatible with Directive (EU) 2016/798 to define an optimal level of technical harmonisation.

To achieve this goal, each TSI shall, amongst other objectives, establish the functional and technical specifications to be met by the subsystems and its interfaces in relation to other subsystems; and shall determine the interoperability constituents and interfaces which must be covered by EU specifications<sup>1</sup>.

Where a certain aspect corresponding to the essential requirements defined by the IOD Directive is not covered in a TSI, it is identified as an open point in the corresponding TSI.

In accordance with Article 13(2) of Directive (EU) 2016/797, national rules for implementing the essential requirements, shall apply in the following cases<sup>2</sup>:

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<sup>1</sup> including European standards, which are necessary to achieve interoperability within the Union rail system.

<sup>2</sup> For existing national rules: Article 14 sets out the cases where Member States shall notify to the Commission and the Agency the existing national rules referred to in Article 13(2).

- (a) where the TSIs do not cover, or do not fully cover, certain aspects corresponding to the essential requirements, including open points;
- (b) where non-application of one or more TSIs or parts of them has been notified;
- (c) where a specific case requires the application of technical rules not included in the relevant TSI;
- (d) national rules used to specify existing systems, limited to the aim of assessing technical compatibility of the vehicle with the network;
- (e) networks and vehicles not covered by TSIs;
- (f) as an urgent temporary preventive measure, in particular following an accident.

Member States may lay down new national rules when a TSI does not fully meet the essential requirements, or as an urgent preventive measure (Article 14(4))

National safety rules in the scope of Directive (EU) 2016/798 and TSI OPE shall not be notified under Directive (EU) 2016/797.

Rules that correspond to the description of infrastructure should be transferred into the Register of Infrastructure (RINF) .

2. Line to take

The Agency will consider the following aspects when receiving/assessing the notification :

- *The MS needs to specify the nature of the notification : “Existing rules” (Art 14.1) or “New rules” (Art 14.4). National rules should be notified each time the national rules are changed, particularly after publication or revision of the TSI(s) concerned. The revision of the rules can be by removal/repeal of rules not necessary (e.g. redundant rules) or by introducing changes to the rules by notification of draft rules.*

*For reference IOD text :*

<b>IOD</b>	<b>Notification of national rules fixed installations by MS</b>
Art. 14.1	Existing rules : <ul style="list-style-type: none"> <li>• <i>Each time the rules are changed;</i></li> <li>• <i>New request submitted in acc. with Article 7 for non-application of the TSI;</i></li> <li>• <i>Rules becoming redundant after publication or revision of the TSI.</i></li> </ul>
Art. 14.4	New rules : <ul style="list-style-type: none"> <li>• <i>TSI does not fully meet the essential requirements (e.g open point, TSI deficiency);</i></li> <li>• <i>An urgent preventive measure, in particular following an accident.</i></li> </ul>
Art. 14.13	Rules not notified <ul style="list-style-type: none"> <li>• <i>Shall not apply for the purpose of the IOD.</i></li> </ul>

- *Identification of the concerned subsystem*
- *Identification of the concerned TSI basic parameter to which the rule is associated with (see Annexes Basic Parameters for Fixed installations)*
- *Identification of the rule scope as described in Art. 13.2 of IOD :*

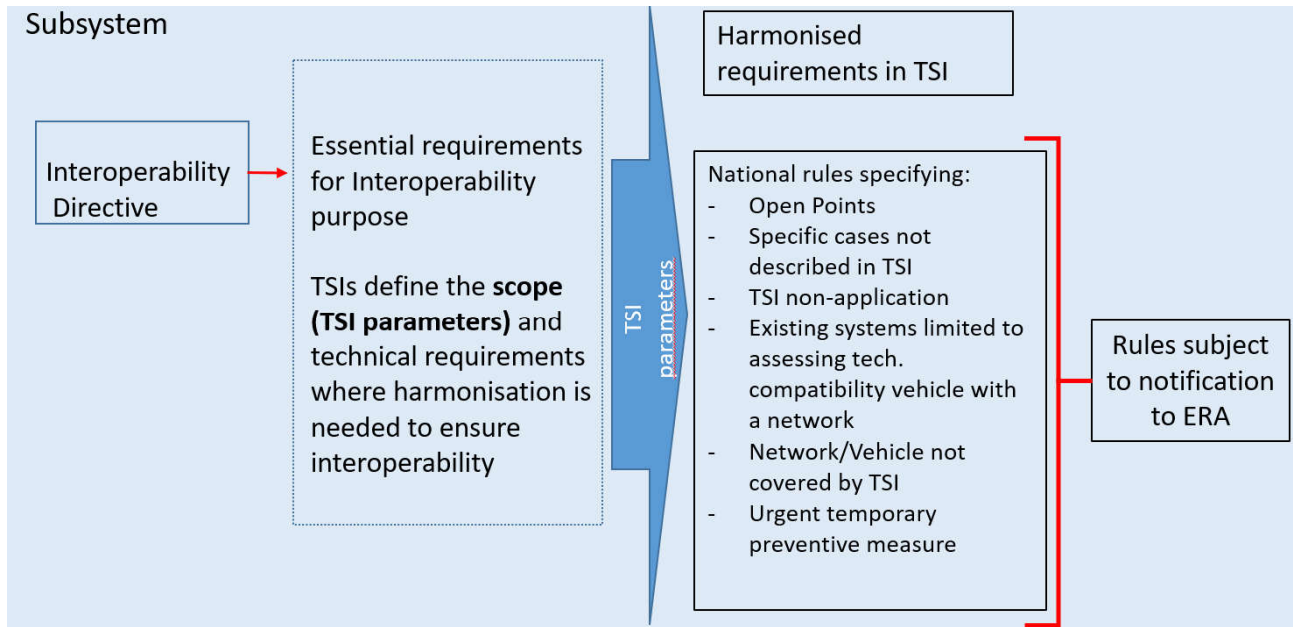
<b>Reference Article 13.2</b>	<b>Clause</b>	<b>Explanation</b>
Article 13.2(a)	where the TSIs do not cover, or do not fully cover, certain aspects corresponding to the essential requirements, including open points as referred to in Article 4(6);	Rules should not exceed the scope of the identified open point  Rules governed by other EU legislation should not be notified under Directive (EU) 2016/797, and should follow their corresponding notification process defined by the other EU legislation such as for example (not exhaustive list) : <ul style="list-style-type: none"> <li>- <i>Directive on Electromagnetic Compatibility (EU) 2014/30</i></li> <li>- <i>Directive on Radio equipment (EU) 2014/53</i></li> </ul>

Article 13.2(b)	where non-application of one or more TSIs or parts of them has been notified under Article 7;	The alternative provisions applied instead of TSIs are covered in Article 7 of Directive (EU) 2016/797:  <ul style="list-style-type: none"> <li>- <i>They are not to be assessed in accordance with Articles 25 or 26 of Regulation 2016/796,</i></li> <li>- <i>They depend on the project (case by case analysis)</i></li> </ul>
Article 13.2(c)	where a specific case requires the application of technical rules not included in the relevant TSI;	Rules should only address the specific cases identified but not described in the TSI
Article 13.2(d)	national rules used to specify existing systems, limited to the aim of assessing technical compatibility of the vehicle with the network;	Such rules covers 'legacy system' not covered by a specific case in TSIs (e.g class B)
Article 13.2(e)	networks and vehicles not covered by TSIs;	Rule(s) are for networks not covered by TSIs:  <ul style="list-style-type: none"> <li>- <i>Harmonisation at EU level has been evaluated as not necessary (e.g. track gauge 1000 mm).</i></li> </ul>
Article 13.2(f)	as an urgent temporary preventive measure, in particular following an accident.	-

- *Justification of the rule according to Article 14.8 of IOD*

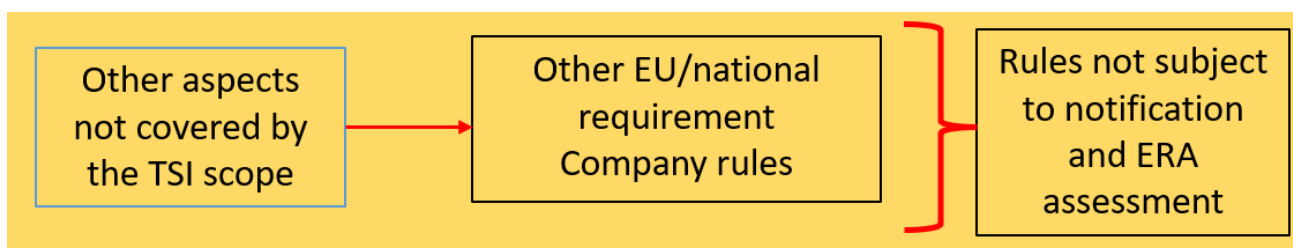
Rules subject to notification and ERA assessment can be summarised as follow :

**Requirements in relation to TSI scope** (described via TSI parameters), where harmonisation for interoperability is needed, are subject to notification :



National rules merely reiterating requirements already existing as TSI harmonised requirements shall be repealed and not notified. Requirements might exist in relation to aspects not to be covered by TSIs. Such requirements are not subject to notification and assessment as defined in the IOD; nevertheless they shall not :

- *be redundant,*
- *be in conflict with the CSMs, CSTs, or any other Union legislation in the railway field, or*
- *create an unjustified barrier to the single railway market.*



### 2.1 Special considerations for trackside CCS

In the particular case of TSI CCS, by nature, a control command and signalling fixed installation encompasses various functionalities realised by different devices such as ETCS trackside devices (RBC, Eurobalise, ...) , class B trackside, GSM-R devices, interlockings, train detection systems (axle counters, ... ), level crossing, lineside signalling (marker boards, ...).

Although all these devices contribute to the proper functioning of CCS trackside subsystem, TSI CCS defines trackside requirements where harmonization is mandatory, for ETCS, GSM-R and interface requirements for train detection systems to ensure their technical compatibility with vehicles.

As a matter of fact, devices such as interlockings or level crossings, are not specified in the TSI CCS, the integration of such devices in the CCS subsystem is to be done taking into account other EU legislations (e.g. application of CSM on risk assessment Commission Implementing Regulation No 402/2013) and other technical standards defined in the TSI CCS (e.g. subset 091).

## **2.2 Special considerations for Infrastructure Subsystem**

For parameters of the SRT TSI regulating Infrastructure Subsystem, it is possible to address via national rules stricter requirements than the TSI ones. Stricter requirements shall be understood as requirements compliant with the TSI but offering higher performances without affecting interoperability.

For some parameters of the PRM TSI (identified in the TSI point 4.2.1 (2) as parameters of the second category), the basic parameter is defined as a functional requirement that can be met by applying several technical solutions and no national rules should be notified.

## **2.3 Special considerations for Energy Subsystem**

For parameters of SRT TSI regulating Energy Subsystem (e.g. via the emergency plan or earthing of contact line), it is possible to address via national rules stricter requirements than the TSI ones. Stricter requirements shall be understood as requirements compliant with the TSI but offering higher performances without affecting interoperability.

### 3. Legal background

#### a) Directive (EU) 2016/797

##### Article 6: Deficiencies in TSIs

1. *If, after its adoption, it appears that a TSI has a deficiency, that TSI shall be amended in accordance with Article 5 (11). If appropriate, the Commission shall apply this procedure without delay. Such deficiencies shall include cases which could result in unsafe operations within a Member State.*
2. *Pending the review of a TSI, the Commission may request an opinion from the Agency. The Commission shall analyse the Agency's opinion and inform the committee of its conclusions.*
3. *At the request of the Commission, the Agency's opinion referred to in paragraph 2 shall constitute acceptable means of compliance and may therefore be used for the assessment of projects, pending the adoption of a revised TSI.*
4. ***Any member of the network of representative bodies referred to in Article 38(4) of Regulation (EU) 2016/796 may make the Commission aware of possible TSI deficiencies.***

##### Article 13: Conformity with TSIs and national rules

1. *The Agency and the national safety authorities shall consider as meeting the essential requirements, those structural subsystems constituting the rail system which are covered, as appropriate, by the 'EC' declaration of verification established by reference to TSIs, in accordance with Article 15, or the declaration of verification established by reference to national rules in accordance with Article 15(8), or both.*
2. *National rules for implementing the essential requirements and, where relevant, acceptable national means of compliance, shall apply in the following cases:*
  - (a) *where the TSIs do not cover, or do not fully cover, certain aspects corresponding to the essential requirements including open points as referred to in Article 4(6);*
  - (b) *where non-application of one or more TSIs or parts of them has been notified under Article 7;*
  - (c) *where a specific case requires the application of technical rules not included in the relevant TSI;*
  - (d) *national rules used to specify existing systems, limited to the aim of assessing technical compatibility of the vehicle with the network;*
  - (e) *networks and vehicles not covered by TSIs;*
  - (f) *as an urgent temporary preventive measure, in particular following an accident.*

##### Article 14: Notification of national rules

1. *Member States shall notify to the Commission and to the Agency the existing national rules referred to in Article 13(2) in the following cases:*
  - (a) *where the national rule(s) has/have not been notified by 15 June 2016. In that case, they shall be notified by 16 December 2016;*
  - (b) *each time the rules are changed;*
  - (c) *when a new request has been submitted in accordance with Article 7 for non-application of the TSI;*
  - (d) *where national rules become redundant after publication or revision of the TSI concerned*
2. *Member States shall notify the full text of national rules referred to in paragraph 1 through the appropriate IT system in accordance with Article 27 of Regulation (EU) 2016/796.*



3. Member States shall ensure that national rules referred to in paragraph 1, including those covering the interfaces between vehicles and networks, are easily accessible, in the public domain and formulated in terminology that all interested parties can understand. Member States may be requested to provide additional information on those national rules.

4. Member States may lay down new national rules only in the following cases:

- (a) when a TSI does not fully meet the essential requirements;
- (b) as an urgent preventive measure, in particular following an accident.

5. Member States shall submit, through the appropriate IT system in accordance with Article 27 of Regulation (EU) 2016/796, the drafts of new national rules to the Agency and the Commission for consideration before the expected introduction of the proposed new rule into the national legal system, in due time and within the deadlines referred to in Article 25(1) of Regulation (EU) 2016/796 and provide justification for the introduction of that new national rule. Member States shall ensure that the draft is sufficiently developed to allow the Agency to carry out its examination in accordance with Article 25(2) of Regulation (EU) 2016/796.

6. When they adopt a new national rule, Member States shall notify it to the Agency and the Commission through the appropriate IT system in accordance with Article 27 of Regulation (EU) 2016/796.

7. In the case of urgent preventive measures, Member States may adopt and apply a new national rule immediately. That rule shall be notified in accordance with Article 27(2) of Regulation (EU) 2016/796 and subject to the assessment of the Agency in accordance with Article 26(1), (2) and (5) of that Regulation.

8. When notifying a national rule referred to in paragraph 1 or a new national rule, Member States shall provide justification of the need for that rule in order to fulfil an essential requirement not already covered by the relevant TSI.

9. Draft national rules and national rules referred to in paragraph 1 shall be examined by the Agency in accordance with the procedures laid down in Articles 25 and 26 of Regulation (EU) 2016/796.

10. The Commission shall establish, by means of implementing acts, the classification of the notified national rules in different groups with the aim of facilitating cross-acceptance in different Member States and the placing on the market of vehicles, including compatibility between fixed and mobile equipment. Those implementing acts shall build on the progress achieved by the Agency in the field of cross-acceptance and shall be adopted in accordance with the examination procedure referred to in Article 51(3).

The Agency shall classify, in accordance with the implementing acts referred to in the first subparagraph, the national rules which are notified in accordance with this Article.

11. Member States may decide not to notify rules and restrictions of a strictly local nature. In such cases, Member States shall mention those rules and restrictions in the registers of infrastructure referred to in Article 49.

12. National rules notified under this Article are not subject to the notification procedure set out in Directive (EU) 2015/1535 of the European Parliament and of the Council <sup>(1)</sup>.

13. National rules not notified in accordance with this Article shall not apply for the purposes of this Directive

*b) TSI CCS (EU) 2016/919 amended by Commission Implementing Regulations (EU) 2019/776, (EU) 2020/387 and (EU) 2020/420*

...

## 2. SUBSYSTEM DEFINITION AND SCOPE

...

**2.2. Scope**

***The Control-Command and Signalling Subsystem TSI specifies only those requirements which are necessary to assure the interoperability of the Union rail system and the compliance with the essential requirements (2)***

*(2) Currently the CCS TSI does not specify any interoperability requirement for the interlockings, level crossings and certain other elements of the CCS.*

*The Control-Command and Signalling Subsystems include the following parts:*

1. *train protection;*
2. *voice radio communication;*
3. *data radio communication;*
4. *train detection.*

*The Class A train protection system is ETCS whilst the Class A radio system is GSM-R.*

*For Class A train detection this TSI specifies only the requirements for the interface with other subsystems*

*Class B systems for the trans-European rail system network are a limited set of train protection and voice radio legacy systems that were already in use in the trans-European rail network before 20 April 2001.*

*Class B systems for other parts of the network of the rail system in the European Union are a limited set of train protection and voice radio legacy systems that were already in use in those networks before 1 July 2015.*

*The list of Class B systems is established in the European Union Agency for Railways technical document 'List of CCS Class B systems, ERA/TD/2011-11, version 4.0.'*

*The requirements for the Control-Command and Signalling On-board Subsystem are specified in relation to Class A radio mobiles and train protection.*

*The requirements for the Control-Command and Signalling Trackside Subsystem are specified in relation to:*

1. *the Class A radio network;*
2. *Class A train protection;*
3. *the interface requirements for train detection systems, to ensure their compatibility with rolling stock.*

*All Control-Command and Signalling Subsystems, even where not specified in this TSI, shall be assessed according with Commission Implementing Regulation (EU) No 402/2013.*

...

**6.1.1.2. Essential requirements fulfilled by National Rules**

*In certain cases, some of the essential requirements may be met by national rules, because of:*

- (1) the use of Class B systems;*
- (2) open points in the TSI;*
- (3) non-application of TSIs (derogations) under Article 7 of Directive (EU) 2016/797;*
- (4) specific cases described in point 7.6.*

*In such cases, assessment of conformity with those rules shall be carried out under the responsibility of the Member States concerned according to notified procedures. See point 6.4.2.*

## Annexes Basic Parameters for Fixed installations

### TSI CCS parameters for Trackside Subsystem

- 4.2.1 : *CCS reliability, availability and safety characteristics relevant to interoperability,*
- 4.2.3 : *Trackside ETCS functionality*
- 4.2.4 : *Mobile communication for GSM-R*
- 4.2.5 : *ETCS and GSM-R air gap*
- 4.2.7 : *Trackside interfaces internal to CCS including Interface requirements between class A (ETCS or GSM-R) and external entities (interlockings, level crossing,...) if such interface exists*
- 4.2.8 : *Key management*
- 4.2.10 : *Trackside train detection system*
- 4.2.11 : *EMC between rolling stock and CCS trackside equipment*
- 4.2.15 : *Visibility of trackside CCS objects*
- 4.2.16 : *Construction of equipment used in CCS subsystems*

### TSI INF parameters for Infrastructure Subsystem

- 4.2.3.1 *Structure gauge*
- 4.2.3.2 *Distance between track centres*
- 4.2.3.3 *Maximum gradients*
- 4.2.3.4 *Minimum radius of horizontal curve*
- 4.2.3.5 *Minimum radius of vertical curve*
- 4.2.4.1 *Nominal track gauge*
- 4.2.4.2 *Cant*
- 4.2.4.3 *Cant deficiency*
- 4.2.4.4 *Abrupt change of cant deficiency*
- 4.2.4.5 *Equivalent conicity*
- 4.2.4.6 *Railhead profile for plain line*
- 4.2.4.7 *Rail inclination*
- 4.2.5.1 *Design geometry of switches and crossings*
- 4.2.5.2 *Use of swing nose crossings*
- 4.2.5.3 *Maximum unguided length of fixed obtuse crossings*
- 4.2.6.1 *Track resistance to vertical loads*
- 4.2.6.2 *Longitudinal track resistance*
- 4.2.6.3 *Lateral track resistance*
- 4.2.7.1 *Resistance of new bridges to traffic loads*
- 4.2.7.2 *Equivalent vertical loading for new earthworks and earth pressure effects imposed on new structures*
- 4.2.7.3 *Resistance of new structures over or adjacent to tracks*
- 4.2.7.4 *Resistance of existing bridges and earthworks to traffic loads*
- 4.2.8.1 *The immediate action limit for alignment*
- 4.2.8.2 *The immediate action limit for longitudinal level*
- 4.2.8.3 *The immediate action limit for track twist*
- 4.2.8.4 *The immediate action limit of track gauge as isolated defect*

- 4.2.8.5 *The immediate action limit for cant*
- 4.2.8.6 *The immediate action limit for switches and crossings*
- 4.2.9.1 *Usable length of platforms*
- 4.2.9.2 *Platform height*
- 4.2.9.3 *Platform offset*
- 4.2.9.4 *Track layout alongside platforms*
- 4.2.10.1 *Maximum pressure variations in tunnels*
- 4.2.10.2 *Effect of cross winds*
- 4.2.10.3 *Aerodynamic effect on ballasted track*
- 4.2.11.1 *Location markers*
- 4.2.11.2 *Equivalent conicity in service*
- 4.2.12.2 *Toilet discharge*
- 4.2.12.3 *Train external cleaning facilities*
- 4.2.12.4 *Water restocking*
- 4.2.12.5 *Refuelling*
- 4.2.12.6 *Electric shore supply*
- 4.4 *Operating rules*
- 4.5 *Maintenance rules*
- 4.6 *Professional qualifications*
- 4.7 *Health and safety conditions*

### **TSI SRT parameters for Infrastructure Subsystem**

- 4.2.1.1 *Prevent unauthorised access to emergency exits and technical rooms*
- 4.2.1.2 *Fire resistance of tunnel structures*
- 4.2.1.3 *Fire reaction of building material*
- 4.2.1.4 *Fire detection in technical rooms*
- 4.2.1.5 *Evacuation facilities*
- 4.2.1.6 *Escape walkways*
- 4.2.1.7 *Evacuation and rescue points*
- 4.2.1.8 *Emergency communication*

### **TSI PRM parameters for Infrastructure Subsystem**

- 4.2.1.12 *Platform width and edge of platform*
- 4.2.1.13 *End of platform*
- 4.2.1.14 *Boarding aids stored on platforms*
- 4.2.1.15 *Passenger track crossing to platforms*

### **TSI ENE parameters for Energy Subsystem**

- 4.2.3 *Voltage and frequency*
- 4.2.4 *Parameters relating to supply system performance*

- 4.2.5 *Current capacity, DC systems, trains at standstill*
- 4.2.6 *Regenerative braking*
- 4.2.7 *Electrical protection coordination arrangements*
- 4.2.8 *Harmonics and dynamic effects for AC traction power supply systems*
- 4.2.9 *Geometry of the overhead contact line*
- 4.2.10 *Pantograph gauge*
- 4.2.11 *Mean contact force*
- 4.2.12 *Dynamic behaviour and quality of current collection*
- 4.2.13 *Pantograph spacing for overhead contact line design*
- 4.2.14 *Contact wire material*
- 4.2.15 *Phase separation sections*
- 4.2.16 *System separation sections*
- 4.2.17 *On-ground energy data collecting system*
- 4.2.18 *Protective provisions against electric shock*

### **TSI SRT parameters for Energy Subsystem**

- 4.2.1.9 *Electricity supply for emergency response services*
- 4.2.1.10 *Reliability of electrical systems*
- 4.2.2.1 *Sectioning of contact line*
- 4.2.2.2 *Earthing of contact line*