AERRL Position on AS-03: Ensuring a Fit-for-Purpose European Framework for Rail Energy Settlement

The Association of European Rail Rolling Stock Lessors (AERRL) welcomes the European Union Agency for Railways' (ERA) Additional Study 03 (AS-03) on the implementation of on-ground energy data collecting systems (DCS) within the European railway system.

The study provides a valuable and evidence-based assessment of the current state of traction energy metering and settlement across Europe. It confirms that significant differences remain between Member States and infrastructure managers, particularly regarding the implementation of on-ground data collecting systems, the exchange of energy data and the practical conditions under which traction energy can be settled on the basis of actual consumption.

For rolling stock lessors, these differences have a direct impact on the interoperability, deployability and lifecycle costs of rolling stock. Divergent national or infrastructure-manager-specific requirements can result in additional technical adaptations, administrative processes and uncertainty when rolling stock is operated across borders. A fit-for-purpose European framework should therefore ensure that compliant rolling stock can be deployed throughout the EU without unnecessary duplication, additional certification requirements or bespoke national solutions.

AERRL supports the overall objective of the AS-03 study and considers that the European framework should now focus on making existing requirements work effectively in practice. In particular, priority should be given to the effective implementation of the existing ENE TSI requirements, the use of existing data flows to streamline energy settlement and the achievement of genuine interoperability and cross-acceptance of Energy Measurement Systems (EMS).

I. Making the Existing European Framework Work

The AS-03 study confirms that the main challenge is not the absence of a European regulatory framework, but its incomplete and inconsistent implementation.

AERRL therefore strongly supports the effective implementation and enforcement of the existing ENE TSI requirements for on-ground energy data collecting systems. Member States should ensure that compliant DCS are deployed and capable of supporting the exchange of the data required for traction energy settlement.

A consistent implementation across Europe is essential to provide railway undertakings with access to reliable energy settlement based on actual consumption and to support the development of an efficient and open energy market for rail. It is also essential from the

perspective of rolling stock lessors, as the benefits of compliant on-board equipment cannot be fully realised if the infrastructure-side systems required to process and settle the data are not available or interoperable.

AERRL therefore considers that the priority should be to ensure the full implementation of the existing requirements before introducing additional regulatory layers. Effective enforcement would also provide greater predictability for rolling stock owners, lessors and operators investing in compliant equipment.

II. Using Existing Data Flows to Streamline Energy Settlement

AERRL strongly supports ERA's recommendation to make use of the train composition data already exchanged between railway undertakings and infrastructure managers for energy settlement purposes.

Train composition messages are already part of the mandatory railway telematics data flows and contain key information required to identify the railway undertaking operating a train, including the European Vehicle Number and the identity of the railway undertaking. This information can therefore be used to match energy consumption data received from the DCS with the railway undertaking responsible for the corresponding train.

Making systematic use of these existing data flows would significantly simplify the energy settlement process. It would enable greater automation, reduce manual intervention and improve the accuracy and reliability of energy billing. Most importantly, it would avoid imposing additional reporting obligations on railway undertakings or rolling stock lessors where the necessary information is already available through existing operational processes.

AERRL considers that existing data flows should be reused wherever possible rather than creating parallel processes specifically for energy settlement. The European framework should promote interoperable and automated data exchange between railway undertakings, infrastructure managers and the entities responsible for energy settlement, while ensuring that data is handled securely and only for clearly defined purposes.

The use of existing data flows should become a practical enabler of a more efficient European energy settlement system and should reduce the need for bespoke national or bilateral arrangements.

III. Ensuring EMS Interoperability Without Creating Additional Regulatory Burden

AERRL strongly supports the objective of ensuring that compliant Energy Measurement Systems (EMS) can be used and accepted across the European Union without divergent national or infrastructure-manager-specific requirements.

The current fragmentation of requirements can create significant additional costs and operational difficulties for rolling stock operating across borders. In some cases, differences

in national or infrastructure-specific requirements may result in additional equipment, repeated assessments or complex procedures for vehicles that are already equipped with compliant EMS.

AERRL recognises that ERA has identified the possible classification of EMS as an interoperability constituent as one way of addressing this fragmentation. However, AERRL considers that the regulatory approach should be carefully assessed against the objective it is intended to achieve.

The existing EN 50463 framework already provides a comprehensive technical framework for EMS. Any future regulatory development should therefore build on this existing framework rather than creating unnecessary additional layers of certification, assessment or authorisation.

In particular, making EMS an interoperability constituent should not result in more cumbersome or paper-heavy processes for the replacement of EMS already compliant with the applicable requirements. It should also not lead to repeated conformity assessments or additional requirements that would increase the cost and complexity of maintaining and upgrading rolling stock.

AERRL therefore supports the objective of full interoperability and cross-acceptance of compliant EMS across the EU, while calling for a proportionate regulatory solution that builds on EN 50463 and avoids unnecessary duplication. The ultimate objective should be that an EMS which meets the applicable European requirements can be installed, maintained and operated across Member States without additional national or infrastructure-manager-specific barriers.

Achieving this objective would provide greater predictability for rolling stock lessors and operators, reduce lifecycle costs and contribute to a genuine European market for EMS and cross-border rolling stock operations.

IV. Strengthening Knowledge and Supporting Consistent Implementation

AERRL supports greater dissemination and knowledge sharing on traction energy metering and settlement.

The AS-03 study shows that traction energy metering remains a highly specialised area, and that knowledge of the applicable European framework, technical standards and settlement processes remains uneven across Member States. This lack of knowledge can contribute to inconsistent implementation and may result in different interpretations or additional national requirements.

ERA and the European Commission should therefore continue to support practical knowledge sharing among Member States, infrastructure managers, railway undertakings and other relevant stakeholders. This should include the dissemination of existing technical

and regulatory guidance and the sharing of experience from Member States and infrastructure managers where DCS and settlement systems are already operational.

However, knowledge sharing should complement, rather than replace, the effective implementation of the existing European requirements. Greater awareness will only deliver its full benefits if it is accompanied by consistent application of the EU framework across Member States.

V. Ensuring Proportionate Requirements for DCS

AERRL supports the objective of ensuring that DCS compliance can be properly assessed and that the relevant requirements are effectively integrated into the European regulatory framework.

At the same time, any amendment to the authorisation framework, including the proposed amendment of Table B.1 of the ENE TSI, should be proportionate and carefully designed. The introduction of additional assessment requirements should not create unnecessary barriers to the authorisation and commissioning of railway infrastructure or add procedural complexity without delivering a clear improvement in interoperability or energy settlement.

AERRL considers that the regulatory framework should provide sufficient assurance that DCS comply with the applicable requirements while avoiding unnecessary duplication of assessments or the emergence of additional national requirements.

The objective should be to ensure consistent compliance across Europe without making infrastructure authorisation more complex than necessary.

VI. Towards More Efficient and Interoperable DCS and Settlement Solutions

AERRL supports further analysis of the costs and benefits of joint or shared DCS and settlement solutions at European level.

Existing DCS and settlement systems already operate in several Member States and demonstrate that different organisational models can support energy data collection and settlement. The priority should therefore be to ensure that existing systems comply with the applicable European requirements and are able to interact effectively with other systems.

AERRL does not consider the replacement of existing compliant DCS by a mandatory centralised EU-level DCS and settlement system to be an objective in itself. A centralised approach could potentially provide benefits in terms of economies of scale and the pooling of specialised expertise, but it could also create unnecessary transition costs and introduce new operational dependencies.

The European framework should instead facilitate the development and use of interoperable DCS and settlement solutions, including joint or shared systems where these provide clear

benefits. Any future EU-level solution should complement functioning existing systems rather than require their replacement solely for the sake of centralisation.

The focus should remain on interoperability, compliance, cost efficiency and the ability of different systems to exchange the information required for accurate and timely energy settlement.

VII. A Fit-for-Purpose Framework for Cross-Border Rolling Stock

The AS-03 study provides a valuable basis for addressing the remaining barriers to efficient traction energy metering and settlement in Europe. For AERRL, the priority is not to add layers of regulation, but to ensure that the existing European framework operates consistently and effectively across borders.

AERRL calls for the full implementation of the existing ENE TSI requirements and for the systematic use of existing train composition data to simplify and automate energy settlement. AERRL also supports the objective of full interoperability and cross-acceptance of compliant EMS, provided that any regulatory development builds on the existing EN 50463 framework and does not introduce unnecessary certification, authorisation or administrative burdens.

At the same time, further improvements to DCS implementation, knowledge sharing and interoperability should be pursued in a proportionate and cost-effective manner. Existing compliant systems should be allowed to continue operating, while the European framework should facilitate their interoperability and the development of shared solutions where these provide genuine benefits.

For rolling stock lessors, a predictable and harmonised European framework is essential to maximise the flexibility with which rolling stock can be deployed across Member States. Requirements should therefore be designed to support interoperability throughout the lifecycle of rolling stock, from authorisation and initial installation through replacement, maintenance and operation.

AERRL encourages ERA, the European Commission, Member States and the relevant rail sector stakeholders to focus their efforts on these priorities and to ensure that the implementation of the AS-03 recommendations contributes to a genuinely interoperable, efficient and proportionate European framework for rail energy settlement.