

Eress

MAGAZINE

2026

**ERAs' STUDY
HIGHLIGHTS**

**SECTOR RESPONSE
TO ERAs' STUDY**

**RAILWAY ENERGY
IN GERMANY**

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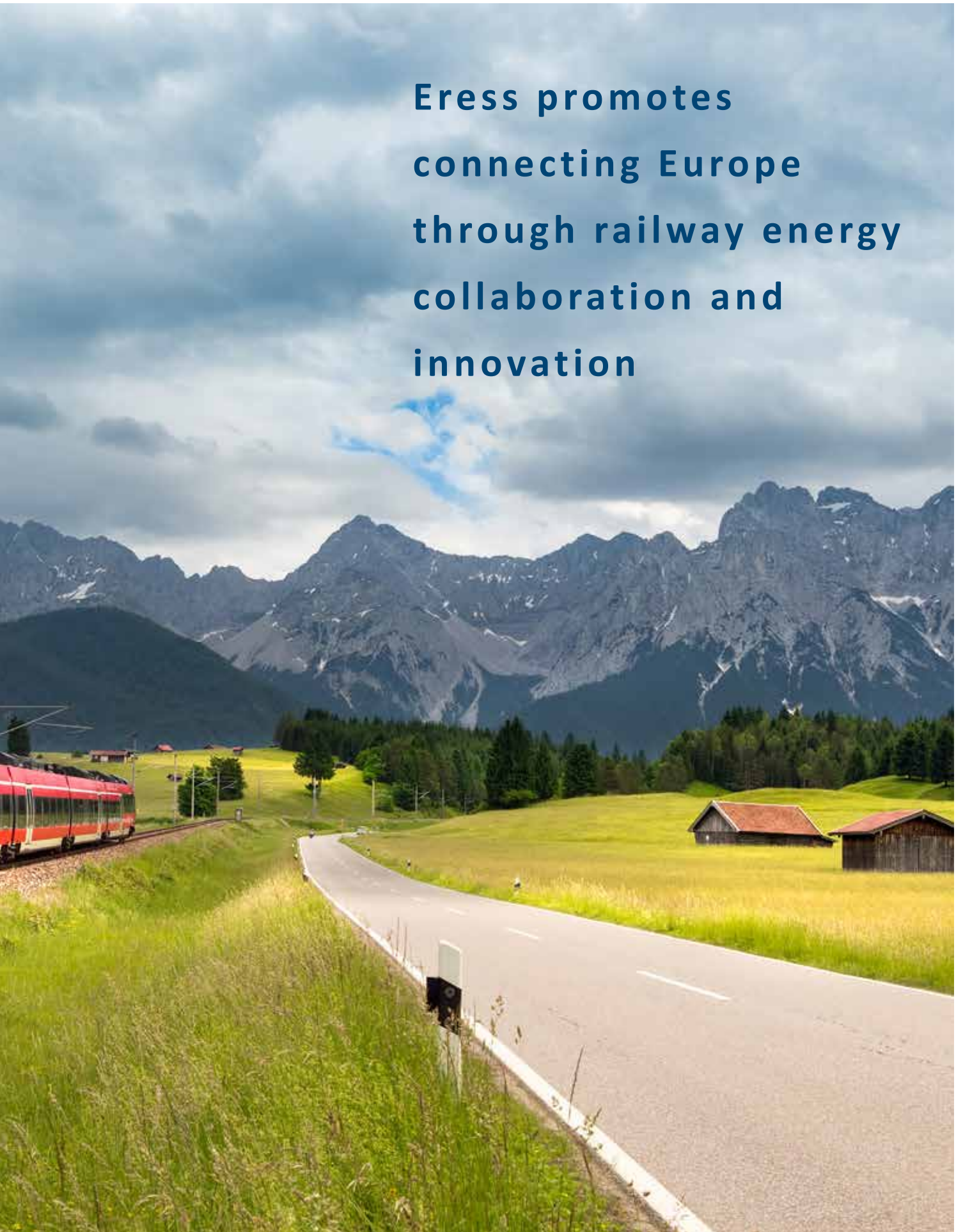
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**Eress promotes
connecting Europe
through railway energy
collaboration and
innovation**



LATEST

Eress Updates

Eress continues strengthening its role as Europe's leading collaborative force in railway energy data, transparency, and innovation.

This year, together with DB Energie, the organisation brought its annual Forum to Frankfurt, uniting experts, infrastructure managers, railway undertakings, and EU policymakers.

Since 2013 Eress and DB Energie have maintained a strong, reliable exchange of energy metering data, enabling accurate settlement and seamless cross-border interoperability between Germany and Eress countries. This cooperation is rooted in transparency, and a standardised way of working, ensuring that data flows consistently and securely across national borders.

Eress stands for a simple conviction: that Europe's railways are stronger when they work together. The partnership promotes a culture of openness, shared standards, and innovation, that is essential for a modern, efficient, and sustainable European railway system.

By harmonising processes and technologies across borders, Eress helps its partners to reduce complexity, improve data quality, and ensure that energy metering data, and ultimately invoicing, are handled in a fair, transparent, and consistent way. This collaborative model, combined with lower costs for each partner, is what sets Eress apart in the European railway landscape.



"This is the first time that we have Eress Forum in Frankfurt and we are very thankful to DB Energie for all their sponsoring and support"

Eress Director, Dyre Martin Gulbrandsen

Two Strategic Projects

In 2026, Eress is advancing two major projects that will significantly improve the collection, management, and uses of railway energy data:

1. Master Data

This project establishes a trusted, unified master data source for energy meters and electric traction units across Europe. By consolidating data from multiple stakeholders into a single, consistent and high-quality dataset, the initiative reduces duplication, improves cross-border consistency, and ensures reliable, up-to-date information.

The ambition is to position the Master Data solution as the most reliable and up-to-date source of master data for infrastructure managers, railway undertakings and vehicle keepers. The project will strengthen data quality, integrity and availability, while enabling more efficient collaboration and lower overall costs through one shared solution.

2. Smart Use of Data

Building on the Erex foundation, this project will enable the creation of advanced statistics, analytics, and performance indicators. It will unlock new possibilities such as predictive analysis, use of artificial intelligence, and enhanced energy efficiency strategies, helping Eress partners to fully use the value of their data.

Together, these projects represent a major step forward in Eress's mission to support a more efficient, transparent, standardised, and sustainable European railway system.

New Cross Acceptance Guide

Another highlight is the launch of Eress "CROSS ACCEPTANCE GUIDE, for Energy Metering Systems in Europe". It addresses a persistent challenge in the sector: the need to repeatedly verify and certify the same energy measurement system before it enters a new country. This is a complex and time-consuming process that creates unnecessary obstacles for train operators and vehicle keepers.

The principle is straightforward: If one country has already accepted an energy metering system, others should not need to repeat the entire verification process.

Developed by Eress technical experts from Switzerland, Belgium, Norway and the Netherlands, the guide offers a comprehensive and pragmatic framework designed to align acceptance procedures, reduce administrative burdens, and accelerate the deployment of compliant energy meters across Europe.

Working together

Eress will continue strengthening its collaboration with both partner and non-partner countries, building on existing solutions while developing new, user-friendly tools. We look forward to seeing the concrete results of ongoing projects such as Master Data and Smart Use of Data, which are expected to deliver real value for our partners. At the same time, we remain committed to helping simplify the complex processes involved in accepting already verified and certified energy-metering systems across borders.

Eress is prepared to contribute with expertise and support both the sector and the European Commission as the follow-up to the ERA study moves toward concrete actions that will foster greater transparency and collaboration across Europe.



RAILWAY ENERGY IN GERMANY

Third-party-access in railway electricity markets is possible

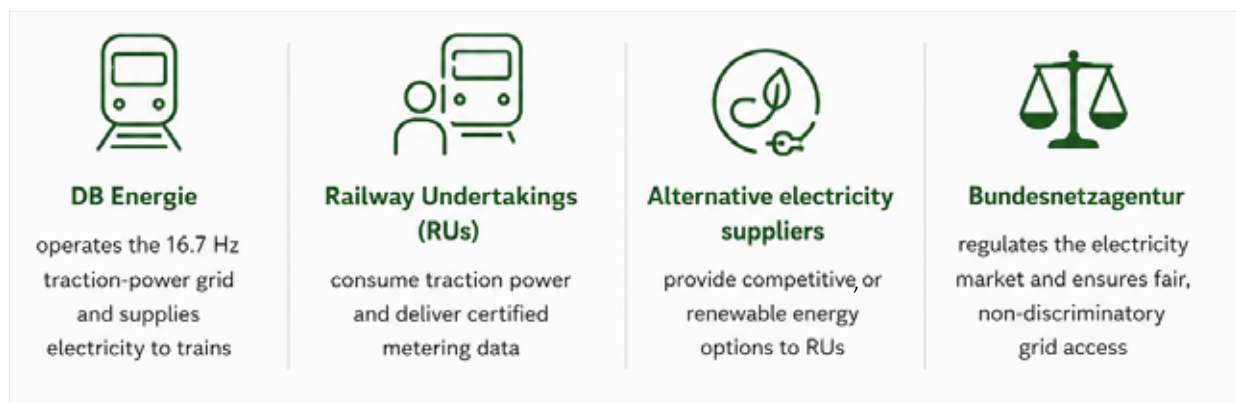
by Florian Baentsch, DB Energie GmbH, Frankfurt am Main

Third-party-access (TPA) in the railway electricity market is possible – this is the main conclusion from the German experience presented to the Eress-Forum taking place in June 2026, in Frankfurt am Main. On the basis of the European Electricity Directive (2019/944/EC) as well as the national Energy Economics Law (Energiewirtschaftsgesetz) and various domestic regulations, the electricity distribution network to supply traction power to railways in Germany is regulated to promote competition. This nation-wide distribution network on the technical basis of 110 kV and 16,7 Hz is owned and operated by DB Energie GmbH, which is a subsidiary of Deutsche Bahn AG. DB Energie guarantees open access to this network and offers the contractual and technical means for all relevant parties.

Within the competitive railway electricity market all railway companies are free to contract an electricity supplier of their choice. Accordingly, about ten to twelve electricity suppliers have entered the

market to serve railway companies. The legal contracts, economic processes and data exchange formats are similar but not completely equal to those applicable to the public 50 Hz electricity market. This is due to certain specific qualities of the railway market. For instance, railway customers are travelling around the country and also cross national borders, which is rather unusual in the normal electricity sector. Railways also use various trains and locomotives to serve their transport obligations and may also exchange locomotives with other operators from time to time. Therefore, the “point of supply” is defined to aggregate all electricity consumption to the correct railway operator. Each railway operator is responsible for the electricity it has actually consumed. Market rules are therefore based on the definition that all trains and locomotives operated by each railway unit at each point in time constitute the “virtual point of supply”.

Who does what in Germany's railway energy?



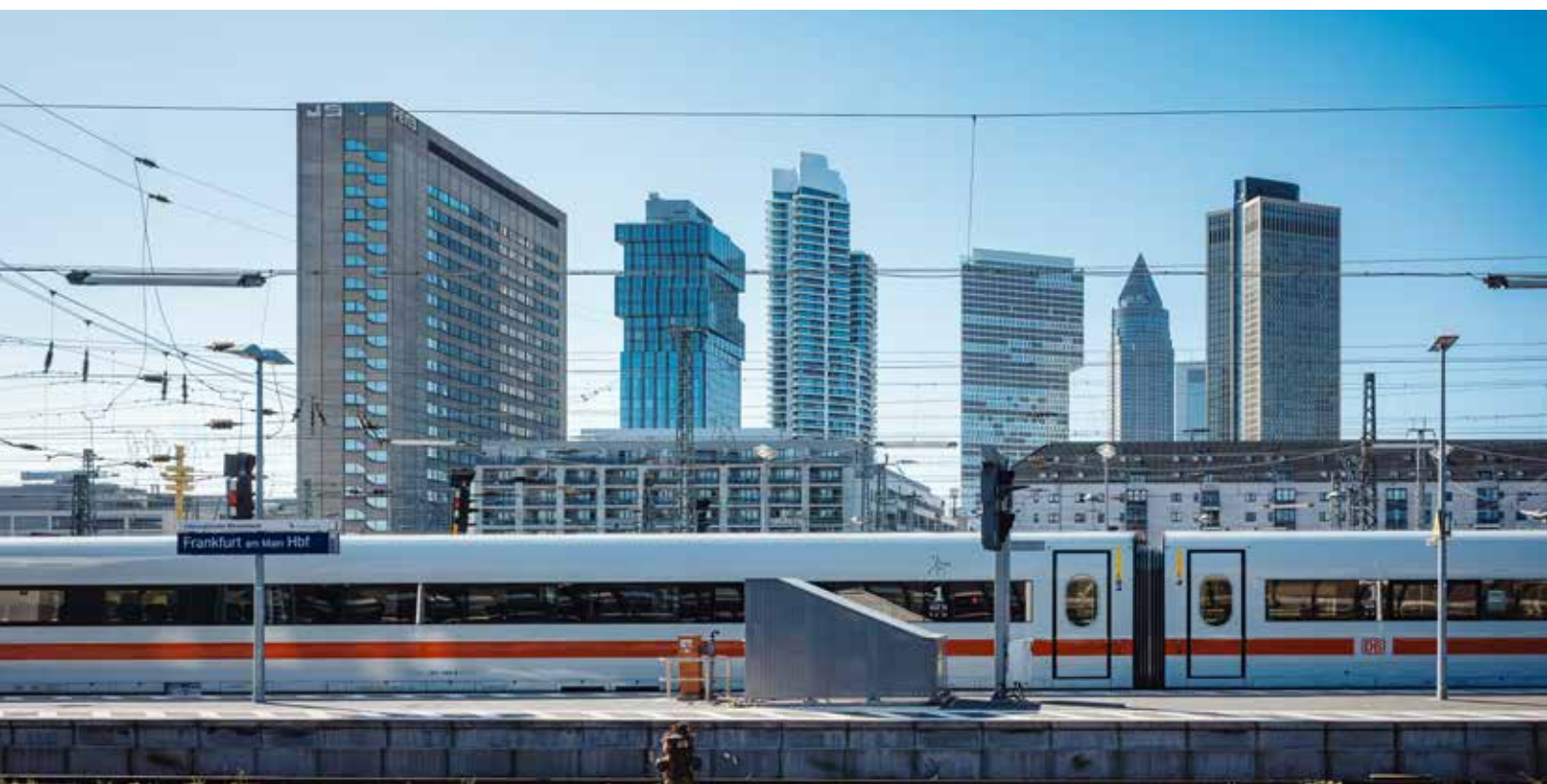
The electricity consumption of each virtual point of supply is calculated as the sum of all measured volumes of electricity consumption. Therefore, measurement of electricity consumption of each train and locomotive is a key feature of the competitive railway electricity market. Electricity consumption data is provided by onboard meters and exchanged with the electricity grid operator. DB Energie therefore processes and delivers such consumption data to all eligible parties; which are: the train operators and their electricity suppliers as well as to other railway infrastructure managers in neighboring countries. This data is also used to charge for the use of the electricity network. Those network access charges are calculated by DB Energie and regulated by the national electricity regulator. All customers find these network charges publicly available on the internet.

Under normal economic circumstances, competition in a market is there to stay. It is hardly possible to put a broken egg back into its shell. But what are normal circumstances, these times? In times of crisis we see regulation also entering the

wholesale electricity market as so called “excessive” revenues of electricity generators are curtailed. Additional regulation has also entered the end-user market. But “electricity price brakes” are only a temporary measure. And as the regulators themselves have often admitted, only competitive energy markets can provide customers with secure volumes of supply at reasonable prices.



Florian Baentsch
Energy Regulation Manager,
DB Energie



ERA 2026 STUDY

Toward EU-Wide Implementation of Energy Metering, Collecting and Settlement Systems

The European Union Agency for Railways (ERA) has published its 2026 study on the implementation of energy metering systems (EMS), data collecting systems (DCS) and settlement systems across the EU railways, an important milestone in Europe's effort to create a transparent, interoperable, and competitive traction energy market for rail.

It also evaluates the conditions required to enable free choice of energy supplier for Railway Undertakings (RUs), a key objective of EU energy market liberalisation.

While progress has been made, ERA identifies significant disparities between Member States. Several countries still lack compliant DCS infrastructure, and certification practices remain inconsistent. These gaps hinder accurate energy data collecting, settlement and billing, limit the benefits of eco-driving and

regenerative braking, and slow the transition toward a more efficient and sustainable railway system.

To accelerate harmonisation, ERA sets out 11 recommendations that outline the actions needed from Member States, Infrastructure Managers, Railway Undertakings, and EU Institutions.

ERA's 2026 study provides a clear roadmap for completing the EU-wide rollout of interoperable EMS, DCS and settlement systems. Its recommendations will guide upcoming legislative and technical discussions, including the next revision of the Energy TSI.

The study confirms a central message: harmonisation, cooperation, and enforcement are essential to unlocking the full benefits of accurate traction energy data for operators, vehicle keepers, infrastructure managers, and other stakeholders.

Study on the implementation of on-ground energy data collecting systems in the EU railway system

2026



ERA'S 11 RECOMMENDATIONS

1. Enforce existing TSI ENE requirements

Member States should fully apply the current Energy TSI obligations to ensure consistent implementation across the EU, including an on-ground data collecting system.

2. Make train composition messages mandatory

RUs should be required to transmit train composition data to Infrastructure Managers, including the European Vehicle Number (EVN) and settlement entities to support accurate allocation of energy consumption.

3. Improve dissemination and stakeholder engagement

The European Commission and ERA should intensify outreach to non-compliant countries, supported by sector-led workshops and cooperative frameworks.

4. Make DCS mandatory for Authorisation for Placing in Service (APIS)

ERA proposes that Notified Bodies assess DCS during infrastructure authorisation.

5. Extend the scope of the Energy TSI

ERA suggests expanding the TSI to include exchange functions and settlement processes, ensuring all Member States implement systems aligned with the International Railway Solution 90930.

6. Consider a single EU-wide DCS and settlement system

While joint systems should be permitted, ERA explores the idea of a unified EU system.

7. Classify EMS as an Interoperability Constituent (IC)

ERA proposes making EMS an IC to strengthen conformity assessment.

8. Clarify the applicability of the Measurement Instrument Directive (MID)

ERA calls for harmonised interpretation of MID to ensure EMS data is accepted for energy billing across all Member States.

9. Strengthen the link between the railway and energy markets

A harmonised EU framework should define roles and responsibilities as rail increasingly interacts with energy and balancing markets.

10. Ensure compliance with cybersecurity legislation

TSIs and EN 50463 should be updated to align with the Cyber Resilience Act and other cybersecurity requirements.

11. Prioritise R&D on EMS technologies

ERA highlights the need for research into mobile re-verification tools, and secure integration of EMS with other on-board systems.



SECTOR LETTER

Response to ERA Study on EMS, DCS and Settlement Systems in EU Railways

The European rail sector has issued a coordinated response following the publication of the Additional Study 03 (AS-03) by the European Union Agency for Railways (ERA).

Released on 19 March 2026, the Study provides the most comprehensive overview to date of the implementation of Energy Measurement Systems (EMS), on-ground Data Collecting Systems (DCS), and settlement systems across the EU railway network.

Stakeholders welcome the report as a valuable contribution from ERA.

The study also clarifies the conditions needed to enable genuine free choice of energy supplier for Railway Undertakings (RUs) within the European energy market.

At the same time, the report highlights persistent challenges, including

divergent national approaches and uneven certification practices. Sector organisations stress that stronger cooperation among Member States is essential to achieving an open, competitive railway energy market.

The study concludes with eleven recommendations, most of which the sector supports, while calling for clarification on several points.

This letter was signed by the following organisations: CER, EAL, EIM, FEDECRAIL, UIP, UNIFE & UIC.

Sector associations reaffirm their commitment to working constructively with the European Commission, ERA, and Member States to advance a harmonised, efficient, and competitive energy framework for Europe's railways



KEY POSITIONS OF THE RAIL SECTOR

1. Enforce existing TSI ENE requirements

Stakeholders fully support stronger enforcement of the current rules.

2. Mandatory train composition messages

The sector endorses the proposal under the Telematics TSI, recognising the need for train composition messages, secure data exchange and protection in a competitive environment.

3. Improve dissemination efforts

Stakeholders call for active engagement by the European Commission and ERA, combined with enforcement of existing requirements.

4. DCS as a prerequisite for Authorisation for Placing in Service

The sector does not support making DCS assessments mandatory for NoBos, arguing that this would not contribute to reducing national requirements related to settlement systems.

5. Extending the scope of the Energy TSI

While the Commission has reservations, stakeholders consider it essential that all Member States implement DCS and settlement systems aligned with IRS 90930. Extending the TSI could help achieve this.

6. One DCS and settlement system for the EU

The sector supports joint systems where appropriate but rejects the idea of a single mandatory EU-wide system, citing risks related to monopoly, flexibility, cost, data governance, and cybersecurity.

7. EMS as an Interoperability Constituent (IC)

Stakeholders do not support classifying EMS as an IC but agree that conformity assessment must be strengthened, including through the ongoing revision of EN 50463.

8. Application of the Measurement Instrument Directive (MID)

The sector requests the Commission to take measures to mitigate risks related to differing national MID implementations, so that they do not undermine the acceptance of EMS data for energy billing.

9. Linking the railway and energy markets

A harmonised EU framework is needed to define roles and responsibilities as the two markets converge. Any integration must preserve the primary function of the railway power grid and ensure compatibility with traction power requirements.

10. Cybersecurity compliance

Adjustments to TSI and EN 50463 are supported to ensure alignment with the Cyber Resilience Act.

11. Research and development priorities

Stakeholders highlight needs such as mobile re-verification tools, alternatives to GNSS for location, and secure integration with other on-board systems.

EU REFORM ADOPTED

New Electricity Market Reform and its Impact on Railways

The EU Electricity Market Design Reform was formally adopted on 20 February 2026 by the European Parliament and the Council of the European Union. This is a major update to how electricity is priced, traded, and contracted across Europe. Although not rail-specific, this reform will directly affect railway energy costs, long-term traction-power contracts, and the integration of rail into future energy markets.

Key elements that matter for rail

Long-term energy contracts (PPAs) become easier

The reform strengthens the framework for Power Purchase Agreements (PPAs), making it easier for large consumers, including railways, to buy renewable electricity directly from producers.

This could allow Infrastructure Managers (IMs) and Railway Undertakings (RUs) to secure stable, long-term renewable energy at predictable prices.

Two-way Contracts for Difference (CfDs) expanded

Member States will increasingly use two-way CfDs to support new renewable and nuclear generation.

A two-way CfD is a contract between a government (or regulator) and an energy producer where:

If the market price is lower than an agreed “strike price”, the government pays the producer the difference. If the market price is higher than the strike price, the producer pays back the extra money to the government.

This stabilises wholesale prices and reduces volatility in traction energy costs.

Stronger rules for flexibility and demand response

The reform introduces new incentives for demand-side flexibility, including storage and smart-charging infrastructure.

This could support future railway grid interactions, such as using stationary batteries at substations or integrating charging for hybrid or battery trains.

Improved protection against price spikes

The EU will introduce clearer mechanisms to prevent extreme price volatility during energy crises. Rail operators, which are major electricity consumers, will benefit from more predictable traction energy bills.

Better integration of cross border electricity markets

The reform strengthens cross border trading rules and grid coordination.

This aligns with the long-term goal of making easier cross border traction energy settlement and free choice of supplier for RUs.

In short, Rail is one of Europe's largest electricity consumers. Therefore, any reform of the electricity market affects traction energy prices, settlement systems,

renewable energy sourcing, cross border operations and investment in electrification and substations.

The new EU energy framework will make it easier for railways to lock in renewable energy contracts, reduce exposure to price spikes, participate in balancing and flexibility markets, and modernise traction power infrastructure.

Source: <https://www.europarl.europa.eu/news/en>



“Collaboration with DSB and DB means we can connect Norway more closely to Europe. In the long term, this could open the door to direct trains to even more European cities”

CEO, Gro Bakstad, Vy



BERLIN - OSLO

Direct Rail Route Will Be Launched In 2028, Connecting Four Countries

A major new international rail connection is set to reshape long-distance travel in northern Europe. Deutsche Bahn (DB), Danish State Railways (DSB) and Norwegian Vy have announced that they will jointly launch a direct Berlin–Oslo service via Copenhagen in summer 2028. The route will be operated using DB's new ICE L trains currently being delivered by Talgo.

Described by DB as one of the longest continuous passenger rail services in Europe, the new connection will run twice daily in each direction, with an end-to-end journey time of 14–15 hours. The service will link four countries and dozens of cities, offering a new alternative to air travel at a time of rising demand for sustainable cross border trains.

A Pan-Nordic Route Connecting Major Hubs

The planned route includes key stops in Germany (Berlin, Hamburg), Denmark (Padborg, Kolding, Odense, Copenhagen Central, Copenhagen Airport), Sweden (Malmö, Lund, Helsingborg, Halmstad, Gothenburg, Trollhättan) and Norway (Halden, Sarpsborg, Fredrikstad, Moss, Oslo).

Vy notes that this will be the first direct Oslo–Copenhagen train in more than 20 years, after the previous service was discontinued due to competition from low-cost airlines. Today, however, the landscape has changed. Demand for international rail has surged, with Vy doubling its services to Gothenburg in 2024 and trialling extensions to Malmö.

In 2025, Vy will operate regular Malmö services on weekends and during holiday periods.

ICE L: A New Standard for Long-Distance Comfort

The ICE L fleet is scheduled to enter service on the Hamburg–Copenhagen corridor in December 2027, ahead of the Berlin–Oslo launch. Each train will feature a restaurant car, family section, and first-class seating, offering a modern long-distance experience designed for comfort on extended journeys.

A European Commission Pilot Project

The Berlin–Oslo service is one of 10 pilot projects supported by the European Commission as part of its action plan to remove barriers to new cross-border rail services. The initiative aims to simplify regulatory processes, harmonise stonal connections.

“With high fuel prices, long-distance trains remain a strong alternative to cars or planes”

Dr. Michael Peterson, Deutsche Bahns' Board Member for long-distance passenger transport



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