

# Contents

## Contact us

### Editorial offices

**Post** 46 Killigrew Street  
Falmouth  
Cornwall, TR11 3PP, UK  
**Tel** +44 1326 313945  
**Web** www.railjournal.com

### Editor-in-Chief

Kevin Smith  
ks@railjournal.co.uk

### Consulting Editor/ Associate Publisher

David Briginshaw  
db@railjournal.co.uk

### Deputy Editor

Mark Simmons  
msimmons@railjournal.co.uk

### Associate Editor

Robert Preston  
rpreston@railjournal.co.uk

### Production Manager

Sue Morant  
sm@railjournal.co.uk

### Advertising sales office

**Post** 1809 Capitol Avenue,  
Omaha, NE 68102  
United States  
**Tel** +1 212-620-7200

### Business development manager

Jerome Marullo jmarullo@sbspb.com  
Tel +1 732 887 5562

### Print magazine subscriptions hotline

**Tel** +1 402 346-4740  
**Fax** +1 (847) 291-4816

International Railway Journal (Print ISSN 2161-7376, Digital ISSN 2161-7368), is published monthly by Simmons-Boardman Publishing Corp, 1809 Capitol Avenue, Omaha, NE 68102, USA. Printed in Great Britain by Micropress and distributed in the USA by Mail Right International, 1637 Stelton Road B4, Piscataway, NJ 08854, USA. Periodicals postage paid at Piscataway, NJ and additional mailing offices. COPYRIGHT © Simmons-Boardman Publishing Corporation 2025. All rights reserved. Contents may not be reproduced without permission. For reprint information please contact Editor-in-Chief. For print magazine subscriptions, assistance & address changes, please call +1 402 346-4740, Fax +1 847 291-4816, Email: internationalrailwayjournal@omeda.com or write to: International Railway Journal, Simmons-Boardman Publishing Corp, PO Box 239, Lincolnshire, IL, 60069-0239, USA



April 2025 Volume 65 Issue 4

## News

- 4 This month
- 6 News headlines
- 12 Transit news
- 15 Financial news
- 17 News analysis

**IRJ's Top Projects Award 2025**  
Innovation and creativity abound  
18 Inaugural global award winners revealed

## Signalling and Telecoms

- 24 Norway: an ETCS trailblazer  
Single contract with Siemens allows rapid progress
- 27 R2Dato: accelerating change  
The digitalisation and automation of Europe's rail network

## The Balkans

- 30 A strategic vision for regional integration  
West Balkan railways look forward to EU membership
- 33 Increased investment in better connections  
Rail projects aplenty in the Balkan TEN-T corridors

## Also in this issue

- 37 Full contact list
- 37 Advertisers index
- 37 Fresh faces
- 38 The last word



## Front cover

**Top Projects Award 2025:**  
Special installation rigs were developed for installing catenary on the Chenab bridge in India, the world's highest railway arch bridge where the deck is 359m above the river bed below.  
Photo: Furrer + Frey



## Trump's trade war sparks industry uncertainty

UNITED States president Donald Trump's trade war has sent shockwaves through the global economy. Share prices are down, old alliances are frayed, and there is a general sense of uncertainty about what comes next.

The North American rail sector is inevitably feeling the impact. Class 1 railways in the US, Canada and Mexico share technical standards and equipment, and networks run seamlessly across borders under a system of free interchange. CPKC prides itself as the first Canadian-US-Mexican Class 1, reflecting the opportunities of the North American Free Trade Agreement (Nafta) of 1992, which was renewed in the United States-Mexico-Canada Agreement (USMCA) of 2020, during Trump's first term. Likewise, US manufacturers rely on global supply chains, including from territories that may now be subjected to tariffs, pushing the price of certain commodities and components up, and putting production under pressure.

Assessing the extent of the medium to long-term harm is proving difficult. It is very much a live issue, with the potential to change by the day. Indeed, Trump's volatility does not help with evaluating what might come next. Requests for comment in mid-March for the purpose of this article to some of North America's leading industry associations and lobby groups went unanswered, perhaps reflecting the political and economic sensitivity of the issue. Some of those in North America who did speak did so on a condition of anonymity, not wishing their companies or themselves to be connected with the debate.

As IRJ went to press, goods classed as having USMCA preference status - those that originate in Canada or Mexico - are not yet subject to the 25% tariff instituted by the US on Canadian and Mexican steel and aluminium on March 12. This means that products such as fertiliser are continuing to

cross borders tariff-free. Trump had identified April 2 as the day when sweeping 25% tariffs on all trade partners will start, although he has hinted at some flexibility in how these duties are imposed.

For many of the Class 1s, any disruption to cross-border traffic flows presents a potentially sticky situation: 41% of CPKC's \$US 8.9bn revenue in 2023 was generated by cross-border traffic, while US-Canada traffic accounted for 32% of Canadian National's (CN) \$US 11.9bn



**For many of the Class 1s, any disruption to cross-border traffic flows presents a potentially sticky situation.**

revenue in the same year. Union Pacific (UP) also has a strong presence in Mexico, with 11% of total volumes in 2023 passing through the country, which has widely been considered a growth market for all the Class 1s.

Speaking at a recent event, Class 1 executives, while conceding that they could not predict what will happen, tried to allay fears. "We have modelled that there will be some impact from tariffs without a doubt, but not so much as to drive Canada into a recession and the US into a high inflationary mode," said CN CEO, Tracy Robinson, during the 42nd Annual Barclays Industrial Select Conference. CPKC president and CEO, Keith Creel, also said the situation presents an opportunity for his railway and the sector in general to tap into new markets.

Among Trump's reasoning for introducing tariffs is to address a perceived trade imbalance by manufacturing more goods within the United States. As the World Trade Organisation (WTO) states, "tariffs give a price advantage to locally-produced goods over similar goods which are imported."

But for rail the impact may not be disruptive as it might seem. Rail industry production

in the United States is already largely a closed shop. Under the latest Buy America requirements all rolling stock and infrastructure procured by government must use US-made steel, components and manufactured products unless it costs 70% more to produce that component in the US. Final assembly must also take place in the US, effectively creating a domestic supply chain for passenger rolling stock and infrastructure. As a result, neither Alstom, which has production facilities in Canada, the United States and Mexico, nor Stadler, which has a plant in Salt Lake City, expect any major impact on their activities from the Trump tariffs.

As private businesses, the Class 1s are not subject to such regulations. However, there have been moves from within the sector to regulate itself by supporting federal rules that limit the influence of outside manufacturers, specifically from China. US tariffs on Chinese steel during the first Trump administration all but eliminated its presence from the US manufacturing supply chain. The Safe Trains Act, issued by the Federal Railroad Administration (FRA) and which became effective in January, bars Chinese-built wagons and systems from being introduced to North America from December.

Of greater concern to these domestic manufacturers is the price of steel, which increased in the first quarter of this year as the threat of tariffs intensified. This is breeding caution within the market. David Nahass, president of Railroad Financial Corporation and *Railway Age's* financial editor, says many companies are now pausing longer-term

capital projects until the situation becomes clearer.

"No one, no company or supply professional, wants to be the party that orders a wagon that is subject to tariffs only to have it not be subject to tariffs two weeks, a month or six months later," he says.

Across the pond and Europe's rail industry is also watching the issue closely. Europe has been hit with similar 25% tariffs on steel and aluminium, and Enno Wiebe, director general of the European Rail Industry Association (Unife), says the general mood is of caution, not jumping to conclusions too early, and to keep calm and carry on.

To thrive, business needs predictability. Unfortunately, in the current climate, this is in short supply. In spite of the growing negative coverage and downward market trends, Trump is standing firm on his tariff policy, effectively creating a stand-off with the US' largest trading partners. For businesses, including those in the rail sector, such uncertainty is unwelcome. Its impact on their investment decisions in the coming weeks and months is likely to prove to be the enduring legacy of the Trump trade war.

*Kevin Smith*

ks@railjournal.co.uk





# CAF strengthens its position as a railway automation pioneer

- Remote, automatic, and autonomous train operations successfully tested in the Netherlands
- Collaboration with Nederlandse Spoorwegen (NS) brings cutting-edge innovation to rail transport

CAF's signalling division has successfully completed the first phase of an ambitious technological innovation project, advancing the implementation of Automatic Train Operation (ATO) up to Grade of Automation (GoA) level 4—fully autonomous driving—within the Dutch railway network. This initiative, undertaken in collaboration with the national railway operator Nederlandse Spoorwegen (NS), represents a significant step forward in railway automation and reinforces CAF's standing as a global leader in technological innovation.

The project will begin its second phase later this year, with tests taking place within the Europe's Rail (EU-Rail) programme. The system is already improved and better aligned with the future European ATO GoA3-4 standard that is being defined.

## A milestone in railway automation

The project encompassed two critical areas of research and development. The first, known as **ATO Endurance**, focused on extensive testing of the ATO system at **GoA2**, Automatic Train Operation with a driver in the cab. These tests were conducted across the entire Dutch railway network, independent of the Automatic Train Protection (ATP) system in place, whether it was **ETCS, the European standard, the national STM-ATB signalling system, or a combination of both**, ensuring seamless transitions between them. The primary goal of this initiative was to assess improvements in **energy efficiency, punctuality, and network capacity**, culminating in an extensive campaign **covering over 40,000km of operational testing**.

The second research area focused on **Remote and Autonomous Shunting operations**, which involved testing remote and fully automated train manoeuvres in real depot environments. This included the **transition between depots and operational stations, even within mixed traffic conditions**. The trials demonstrated the feasibility of both **remote-controlled operations (GoA1 and GoA2)** and **fully autonomous manoeuvres (GoA4)**, setting a new benchmark for railway automation.

## Demonstrating Cutting-Edge Capabilities

One of the most remarkable achievements of the programme was a successful live demonstration at **the De Vork depot and Groningen's main station**. The exhibition featured a **remote driving (GoA1) run**, including remote-controlled coupling and uncoupling operations, followed by a **fully autonomous GoA4 journey**. The GoA4 trial showcased advanced automation capabilities, such as:

- **train preparation and switch down actions**
- **cabin selection/change management**
- **mission profile execution**
- **automated coupling and uncoupling with other trains**
- **autonomous driving, responding to lateral signalling**
- **real-time obstacle detection**, identifying track buffer stops, road vehicles at level crossings, other trains, and even dummies placed along the route.



CAF has equipped NS SNG 3002 with its ATO equipment for the trials.

## Overcoming operational challenges

A critical aspect of these trials was evaluating system reliability under adverse conditions. The tests took place during heavy rain and snowfall, and at night, posing significant challenges to the perception and sensor technologies. The results provided valuable insights into the performance of CAF's automation systems in real-world scenarios, offering a measure of confidence in their potential application in future railway operations, although further assessments remain necessary.

## Shaping the future of rail transport

CAF's latest innovations mark an important milestone in the transition towards a more efficient, safe, and **sustainable railway industry**. By **optimising train performance through automation**, these advancements offer the potential to **reduce energy consumption, enhance punctuality, and maximise railway capacity utilisation**.

The successful execution of these projects strengthens CAF's role in the global railway automation landscape and paves the way for broader implementation of autonomous train technologies across European and international networks.

# FRA to review California high-speed project

UNITED States secretary of transportation, Sean Duffy, has instructed the Federal Railroad Administration (FRA) to launch a review of the California high-speed rail project. Duffy is questioning whether the \$US 4bn in grant funding previously pledged by the federal government should remain committed to the project, the first section of which is under construction between Merced and Bakersfield.

The California High-Speed Rail Authority (CHSRA) received significant funding from the Biden administration, including a \$US 3.1bn Federal-State Partnership for Intercity Passenger Rail Grant in December 2023, the single

largest federal grant for the project.

However, the overall cost of the project has led the current Trump administration to question its viability. The FRA says the entire San Francisco - Los Angeles project was originally planned in 2008 to be completed by 2020 at a cost of \$US 33bn. "Today the Merced - Bakersfield segment alone would cost more than the original total," it says.

CHSRA is aiming to complete the 191km Central Valley segment by 2028, and the full 275km Merced - Fresno - Bakersfield section by 2030-2033. It says there is currently a funding gap of \$US 6.5bn for Merced - Bakersfield, and in

March 2023 expected the entire San Francisco - Los Angeles project to cost \$US 128bn, with a funding gap of more than \$US 100bn.

In a letter to CHSRA CEO, Ian Choudri, FRA chief counsel, Kyle Fields, cites a report published by the CHSRA inspector general in October, which found that CHSRA's schedule may not accurately account for current conditions and risks. Fields says that the review will examine CHSRA's compliance with FRA-administered grant agreements to determine whether CHSRA has fully met its obligations.

"FRA is further advising CHSRA that the compliance

review and resulting findings may result in remedial action up to and including withholding of reimbursement and termination of cooperative agreements," Fields says.

In response, CHSRA says that the State of California has provided \$US 10.5bn of the approximately \$US 13bn spent on the project so far, and that this expenditure has had a positive economic impact of over \$US 22bn. "Every dollar of the project is accounted for and has been thoroughly reviewed by the independent Office of the Inspector General [whose] sole focus is improving oversight and accountability of the California high-speed rail project."

## Amended Cape Town commuter Service Level Plan agreed

THE city of Cape Town in South Africa has signed an amended Service Level Plan (SLP) with the Passenger Rail Agency of South Africa (Prasa). Its key objectives include the creation of an efficient and effective commuter service through the establishment of an integrated public transport network.

The SLP is also intended to lay the foundations for future rail devolution. Under South Africa's National Rail Policy, municipalities or cities would run and develop passenger services.

The amended SLP has corrected errors and omissions in the original document signed in December. At the time, Prasa said: "This Service

Level Plan is specifically designed to enhance cooperation between the city and Prasa, and it is not an agreement about the devolution of rail services to the city of Cape Town, where rail services remain the exclusive prerogative of the Department of Transport."

For the moment, Prasa and the city of Cape Town will cooperate on safety, land development along transport corridors, prevention of illegal occupation of Prasa property, management and maintenance of infrastructure around stations, multimodal transport interchanges, and integrated public transport planning. A single payment system will be developed for all public transport in the city.

## Kyrgyzstan signs first rail PPP

THE National Investment Agency of Kyrgyzstan has signed a public-private partnership (PPP) agreement with Kyrgyz Railways (KTZ) and All American Rail Group (AARG), which includes the construction of a new railway from Makmal to Karakol.

Development of the Trans-Eurasian Route, intended to improve connections with neighbouring countries, is the first PPP project in the rail sector in Kyrgyzstan, according to the director of the National Investment Agency, Talantbek Imanov.

"The total investment is about \$US 3bn," Imanov says. "This will not only create new jobs, but also significantly improve the transport network, providing economic benefits for the republic in the long term."

AARG is based in Richmond, Texas, and is a partnership of companies active in the design, engineering, construction and management of railway infrastructure. In December 2023 AARG signed a memorandum of understanding (MoU) with the Ministry of Transport in Angola to build a \$US 4.5bn railway from the capital Luanda to the border with the Democratic Republic of Congo (DRC).



**TGV M interior revealed:** French National Railways (SNCF) and Alstom have unveiled the interior of the TGV M, the fifth generation of the TGV high-speed train family, which is expected to enter service in early 2026. Designed by French agency Arep and Nendo of Japan, the interior offers improved accessibility as well as greater capacity by freeing up space previously occupied by electrical equipment. Photos: David Haydock



## ERA selects Gherghinescu as new executive director

**T**HE management board of the European Union Agency for Railways (ERA) selected Oana Gherghinescu to be the next ERA executive director on March 19, one of three candidates shortlisted for the post.

Holding a doctorate in international economics, Gherghinescu is described by ERA as an accomplished leader with over 22 years of experience, including 11 years



at ERA where she has latterly held the post of head of the executive office.

The other candidates for the post were Laurent Cébulski, the current director general of France's Railway Safety Board (EPSF), and Matej Zakonjšek, director of Transport Community, an organisation lobbying for transport investment in the Western Balkans (p30).

Until the new executive director takes office, Pio Guido will continue as acting executive director of ERA. He took over as head of the agency on January 1, the day after Josef Doppelbauer stood down as executive director upon the expiry of his 10-year mandate.

Welcoming the choice of Gherghinescu to lead ERA, the European Rail Industry Supply Association (Unife) says that the incoming executive director will have many challenges awaiting her.

These include "decisive action" on ETCS, the Future

Railway Mobile Communication System (FRMCS) and the Digital Automatic Coupler (DAC), as well as harmonising operating rules and maintaining the focus on cybersecurity and digital network resilience.

The association also expects Gherghinescu to bring renewed energy and vision to delivering ERA's key tasks, notably streamlining the vehicle authorisation process in anticipation of the expected wave of ETCS and FRMCS retrofit work, and the DAC rollout.

"Strong leadership and the adoption of pragmatic solutions is required to simplify and accelerate the introduction of innovative technology for a more efficient, attractive and competitive European railway network," says Unife director general, Enno Wiebe.

"This is what we hope the incoming ERA executive director's term will be remembered for."

## Afghanistan

The Ministry of Public Works has signed a contract worth \$US 3.6m for a survey and design work for the proposed 735.5km new line between Herat and Kandahar.

## Africa

Korea's national operator Korail has signed memoranda of understanding (MoUs) with Ethiopian Railways Corporation and Botswana Railways, with both agreements aiming to strengthen cooperation and knowledge exchange between Korail and the two companies.

## Australia

The New South Wales (NSW) state government is to spend \$A 40.3m (\$US 25.7m) to upgrade its fleet of XPT diesel trains over the next five years. The trains, which serve regional centres across NSW, have been in operation for over 40 years and were due to have been replaced with new Regional Rail trains.

## Estonia

Rail Baltica, the project to build an 870km standard-gauge line linking Estonia, Latvia, Lithuania and Poland, has selected two international consortia as the preferred bidders for construction of the Estonian section.

## Europe

Private night train operator European Sleeper has finally operated its winter service between Brussels and Venice throughout. The first direct southbound train ran on March 5 and returned on March 8. Trains on the Italian leg, between Brennero and Venice, are being hauled by Italian State Railways (FS) subsidiary Italian Tourist Trains (TTI).

• German Rail (DB) Long Distance has confirmed reports in the German media that it will operate Siemens class 408 ICE 3neo high-speed trains on the Berlin - Amsterdam route from December, instead of the planned ICE L push-pull trains manufactured by Talgo.

## Finland

National operator VR has

## Further delay for Thailand's first high-speed line

**T**HAILAND's troubled project to build a high-speed line from Bangkok to the border with Laos and ultimately China has suffered another setback, with construction of the 253km first phase from Bangkok to Nakhon Ratchasima further delayed by up to a year.

Completion of the Khok Kruat - Nakhon Ratchasima section was scheduled for last month. But on March 5 State Railway of Thailand (SRT) announced that this has been postponed to March 2026, due to a legal dispute over land expropriation.

While work started in December 2017, construction of the first phase was only 36% complete in January, several years behind schedule. It is now due to open in 2028.

According to the government, bids to undertake civil works on the 357km second phase, from Nakhon Ratchasima to Nong Khai, are expected later this year. The entire line from Bangkok to the Laos border is still expected to be completed in 2030.

## German parliament approves €500bn infrastructure fund

**G**ERMANY's outgoing government voted on March 18 to create a publicly-owned infrastructure fund which will provide €500bn over a 12-year period. The federal government will be responsible for providing €400bn, with the remainder divided between Germany's state governments.

MPs circumvented constitutional limits on public borrowing, known as the debt brake, by classifying the infrastructure fund as a special fund, thereby making it exempt.

How money from the infrastructure fund will be allocated has yet to be decided, although support for the new fund from the Greens was conditional on €100bn being invested in the existing climate and economic transformation fund (KTF).

Transport is expected to be a key beneficiary of the remainder held in the new infrastructure fund. Ahead of the vote, German media reported that German Rail (DB) is seeking €150bn, or 30% of the total infrastructure fund, for investment in the

national rail network. This would be in addition to the €140bn already requested by DB from the government.

The German Rail Freight Association (Die Güterbahnen) says creation of the new fund is an ideal moment for change. "A longer-term and legally-anchored guiding strategy for rail infrastructure development by the federal government is needed," it says. "The entire process should be controlled by a new Federal Office for Rail Transport based on the Swiss model."