

Railway industry urges Government to begin programme of rail electrification now, in order to meet Net Zero legal commitments

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An open letter to the Transport Secretary Grant Shapps MP, signed by more than 15 rail businesses, and industry and campaign groups, has called for a programme of rail electrification to begin as soon as possible to meet the Government's legally binding net zero commitments.

The letter comes on the back of a new report, *"Why Rail Electrification?"* which sets out why – even with the development of clean new technologies like battery and hydrogen trains – the industry will be unable to decarbonise the rail network to the extent required without significant further electrification.

Rail is already a low carbon method of transport, contributing just 1.4% of all transport emissions. However, the industry will need to decarbonise further if it is to achieve the Government's aim of removing all diesel-only trains off the network by 2040 and the legally binding commitment to Net Zero by 2050.

According to Network Rail, to decarbonise the network, 13,000 single track kilometres – or around 450km a year – of track will need to be electrified by 2050 in order to achieve Net Zero, yet from 2019-2020 only

251km was electrified.

Darren Caplan, Chief Executive of the Railway Industry Association (RIA), said: "It's great to launch the '*Why Rail Electrification?*' report today, as part of RIA's RailDecarb21 campaign – calling on the Government to support efforts to decarbonise the rail network ahead of the COP26 Conference in Glasgow later this year.

"The report clearly shows the rail industry will be unable to decarbonise the network without a rolling programme of electrification. As RIA has demonstrated in recent work, electrification in the UK can be delivered affordably, at up to 50% the cost of some past projects, if there is a long-term, consistent, profile of work rather than the current situation of boom and bust.

"Crucially, a rolling programme of electrification needs to start now if the Government is to hit its Net Zero obligations, and if the railway industry is not to lose capability and expertise from the current hiatus in activity. Also, by committing to electrification immediately, UK rail could be a world leader, creating and sustaining green jobs, investment and economic growth at a critical time for the UK economy as we all seek to build out of the Coronavirus pandemic."

Report Lead Author, David Shirres, said: "The '*Why Rail Electrification?*' report complements Network Rail's Traction Decarbonisation Network Strategy by explaining why electrification is both a future-proof technology and a good investment.

"If Britain is to decarbonise, transport has to be weaned off petroleum for which the only zero-carbon alternative is electricity. However, electricity can only be transmitted to fixed locations and then converted into another form of energy for on-board storage. This significantly limits a vehicle's power and range. In contrast, electric trains collect electricity on the move from fixed current collection systems and feed it straight into their motors without any energy conversion losses. Hence, they offer efficient high-powered net-zero carbon traction with large passenger, freight, and operational benefits.

"It is hoped that this report, which is supported by rail businesses and professional engineering institutions, will be read by decision makers to enable them to understand exactly why rail electrification offers such advantages."

Noel Dolphin, Campaign to Electrify Britain's Railway (CEBR), said: "We welcome the launch of '*Why Rail Electrification?*' report. Rail is already a low carbon option for transport. The report clearly demonstrates that due to the laws of physics the majority of the network will require electrification, if the UK is decarbonise the railway. We believe this can only be delivered affordably through a long-term rolling programme. With current electrification projects completing, we are about to enter another boom and bust cycle, that will make it harder to achieve decarbonisation and cost efficiency in the future. We call on the Government and Network Rail to bring forward 'no regrets' schemes now."

Paul Tuohy, Chief Executive of Campaign for Better Transport, said: "We want to see the Government encouraging people to switch their journeys to rail, while at the same time making rail even greener through a rolling programme of electrification. What a powerful combination this would be in the fight to decarbonise transport and improve air quality."

Alasdair Reisner, Chief Executive of the Civil Engineering Contractors Association, said: “Electrifying rail provides clear benefits to passengers and freight transport as outlined in ‘Why Rail Electrification?’. Now, as the UK looks to meet its net-zero targets, there is added urgency to decarbonise the rail network through a rolling programme of electrification. Moving on from a stop-start approach, industry is ready to deliver investment in a way that better retains skills and provides the best value for money.”

Luke Osborne, ECA’s Energy & Emerging Technologies Solutions Advisor, said: “Full electrification of our transport network is an essential part of the drive to net zero. If we are to reach zero carbon emissions by 2050 we must invest in an electric infrastructure which can be supported through decarbonisation of our energy networks and advances in electrical energy storage systems.”

Zoe McLernon, Multi Modal Policy Manager at Logistics UK comments: “Logistics UK has consistently called for a structured programme of rail electrification to help deliver net-zero emissions by 2050 and to support further private sector investment in the UK’s rail freight sector. The latest research from RIA provides compelling evidence on the importance of electrification for both business and the environment.”

Mike Hulme and Justin Moss, Co-Chairs at the Northern Rail Industry Leaders (NRIL), said: “Rail decarbonisation is essential not only to reaching our climate change goals, but also in restarting the economy post-Coronavirus. Electrification, particularly of key lines in the North, like the Trans Pennine Route, will be essential over the coming years, as this report sets out.”

Robert Nisbet, Director of Nations and Regions at the Rail Delivery Group, said: “Rail already cuts millions of tonnes of emissions annually by reducing reliance on cars and rail companies are making trains even greener by investing in new battery technology and thousands of new bi-mode trains. To further decarbonise our railway, a long term commitment to electrifying tracks is needed in place of stop-start investment which increases costs overall.”

Elaine Clark, CEO of Rail Forum Midlands (RFM), said: “A rolling programme of electrification is essential to enable the UK to meet its net zero targets, to enable the industry to deliver as cost effectively as possible and to drive investment in future skills. Kickstarting a rolling programme of electrification will set us on course to lead the green recovery and decarbonise the network; we now need government’s commitment and backing to allow the industry to deliver”.

Maggie Simpson OBE, Director General of Rail Freight Group (RFG), said: “Rail freight is already one of the most sustainable modes for moving goods, and our customers are ambitious for us to become even greener. Electrification is essential for decarbonising rail freight and we support the publication of today’s report which sets out a compelling case for action.”

Chris Page, independent campaign group Railfuture’s national Chair, said: “Britain needs a bigger better railway to improve living standards and social cohesion. To be efficient, provide a positive passenger experience, be good for air quality and climate health – it has to be an electrified railway.”

George Davies, Director, Sustainable Development, RSSB, said: “Electrification will play a significant part in a sustainable railway, a rolling programme of electrification is vital to maximising the potential of rail in Britain’s low-carbon transport system of the future.”

1. Documents

- The Open Letter to the Secretary of State for Transport can be found attached
- [The “Why Rail Electrification” Report can be found here](#)

2. Current rate of electrification

- [The rate of electrification per year can be found on the ORR’s website here](#)
- Network Rail’s Interim Traction Decarbonisation Strategy shows that to reach net zero by 2050, the UK will need:
 - 11,700 kilometres of track to be electrified;
 - 900 kilometres for hydrogen trains;
 - 400 kilometres using battery trains; and
 - 2,300 kilometres where multiple options are available.

3. Signatories of the open letter:

- Campaign for Better Transport: <https://bettertransport.org.uk/what-we-do>
- Campaign to Electrify Britain’s Railway: <https://www.railwayelectrification.org/about-us>
- Civil Engineering Contractors Association: <https://www.ceca.co.uk/about-ceca/>
- Electrical Contractors’ Association: <https://www.eca.co.uk/about-the-eca>
- Institution of Mechanical Engineers: <https://www.imeche.org/>
- Logistics UK: <https://logistics.org.uk/>
- The National Skills Academy for Rail: <https://www.nsar.co.uk/aboutus/>
- Northern Rail Industry Leaders (NRIL): <http://riagb.org.uk/NTHRailLeaders>
- Permanent Way Institution: <https://www.thepwi.org/>
- Rail Alliance: <https://www.railalliance.co.uk/>
- Rail Delivery Group: <https://www.raildeliverygroup.com/>
- Rail Forum Midlands (RFM): www.midlandsrail.co.uk
- Rail Freight Group (RFG): <http://www.rfg.org.uk/about-us/>
- Railfuture: <https://www.railfuture.org.uk/>
- Railway Industry Association (RIA): www.riagb.org.uk/
- RSSB: <https://www.rssb.co.uk/who-we-are>
- Urban Transport Group: <https://www.urbantransportgroup.org/about-us>

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