

# The plans for rail to achieve net zero: Transport Decarbonisation Network Strategy revealed

September 11, 2020



Network Rail has published its preliminary recommendations for decarbonising the rail network.

The Traction Decarbonisation Network Strategy includes plans for 12,000 kilometres of electrification by 2050 and a key role for zero carbon traction, including hydrogen and battery technology.

In the foreword in the report, Paul McMahon, Managing Director System Operator, said: “This strategy sets out why decarbonising rail traction is so important and considers the three main ways of doing it – overhead electrification, battery and hydrogen fuel cells. It then looks at every section of unelectrified line in the country to see where each solution can be most effectively used.

“While more work is still needed, in particular the development of regional delivery plans, this strategy will support and inform policy and funding decisions on what needs to be achieved and when.

“Carrying out this work in a way that is efficient and represents best possible value for money is essential.

This strategy shows that the best way of doing this includes a long-term, stable and efficient programme of electrification which will last for at least thirty years, alongside the introduction of new technology.

“If we can do this, I am confident that rail will play a vital role in helping build Britain back better and achieve the Government’s commitment to achieve net zero by 2050.”

According to the strategy, there is currently 15,400 single track kilometres of unelectrified rail network in Great Britain. Capital costs at this stage have been estimated using a wide total cost bracket spanning from £1m/STK to £2.5m/STK.

The report also reveals that analysis of the recommendations suggests that between 3,600 and 3,800 electric and 150 and 200 battery and hydrogen trains will be required from the traction decarbonisation recommendations, but the need for interim solutions will likely increase the number of battery and hydrogen trains needed in the short-term. Around 650-700 freight trains will also be required.

David Clarke, Technical Director of the Railway Industry Association, has welcomed the plan.

He said: “The publication of Network Rail’s interim Decarbonisation Plan is very positive, setting out a clear case for the electrification of intensively used passenger and most freight lines, with the decarbonisation of other routes through zero carbon technologies, like hydrogen and battery. Hydrogen and battery technologies are likely to play an even greater role in the medium term to reduce carbon emissions whilst electrification is being rolled out.

“This report, developed with the rail industry, comes at a pivotal time, as current work to electrify the Midlands Mainline comes to an end, leaving the UK with no electrification projects being delivered on the ground. Without further work soon, the industry will begin to lose valuable skills and the capacity to deliver these schemes, making it harder to deliver these projects when work resumes.

“This is a big opportunity for the rail industry to provide a clean, green and more connected railway, encouraging more people onto low carbon transport, whilst generating jobs and investment following the Coronavirus pandemic. But to do this we need Government to give the ‘green light’ to support electrification, support the deployment of low carbon train fleets and support the sector, so we can deliver an environmental, economic recovery. This green light need not wait for the final Strategy to be published – there are projects which should be progressed immediately.”

Click [here](#) to view the full report.

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