

Electrification

ATOC's view

- The UK has one of the lowest proportions of electrified railway in Europe. ATOC has been advocating that this should be improved and therefore welcomes the Government's plans for further electrification in the North West and particularly those for the Great Western Main Line to Bristol and Cardiff. There is a sound basis for further electrification; it will reduce operating costs, improve journey times and cut carbon emissions. We are working closely with Department for Transport (DfT) and Network Rail (NR) to develop and implement these schemes and further plans.
- Electrified railways are also more environmentally friendly. Electrification will make a significant contribution towards reducing the carbon emissions both of the rail network as a whole and Britain's transport. Electrified systems allow the re-generation of electricity through the train's braking system which can reduce power consumption by up to 15%. Electric trains are also quieter than diesel trains and, with no engine emissions, are much cleaner.
- Whilst work on implementing the 'infill' electrification in the North West has now started with the Great Western programme shortly to follow, ATOC advocates that these schemes should be the commencement of a 'rolling programme' of electrification in order to secure the best possible business case to deliver a national electrification programme.
- ATOC believes that as part of this rolling programme, planning must start now for the development of future schemes such as the Trans Pennine and Midland Mainline routes to be taken forward in CP5 in order to maximise the benefits of electrification. The development of a longer-term plan of work to continue through CP5 and beyond will permit the delivery of reduced capital costs over time, thus improving the business case for electrification schemes and value for money for the taxpayer; it will also allow a more efficient procurement programme for rolling stock to be developed as well as permitting greater flexibility by facilitating cascade of rolling stock from other parts of the network.
- We believe that the medium-term plan for the rolling programme of electrification should cover at least 10 years, including up to 200km of further infill a year.

Background and key issues

- There are currently only 5,250 route kilometres out of 15,795 kilometres of the UK network electrified (35%). Just over half - 55% - of all train kilometres are operated by electric trains.
- The last major electrification scheme undertaken on what is now the Network Rail network was the East Coast Main Line in the early 1990s. However, in Scotland the recently re-opened Airdrie – Bathgate link has been electrified throughout and a further programme of electrification within the Glasgow conurbation and towards Edinburgh and Dunblane is due to be completed by 2016.
- The earlier High Level Output Statement White Paper of 2007 was dismissive of further electrification, arguing that the developments in technology for replacement of diesel fuel in a low carbon world may render electrification pointless. However, within the industry there was considerable scepticism and in October 2007, ATOC and Network Rail asked the DfT to reconsider their approach towards electrification. More recently there has been a change in the political view in favour of electrification with the announcement of a number of infill schemes and the major development on the Great Western Main Line.

- ATOC commissioned work to identify and develop the business case for electrification. This work confirmed that there is likely to be both a cost saving and a carbon case for electrification. It recommended that the priority should be to electrify the Great Western - the former being the most intensively worked diesel railway in Europe (now being planned) followed by the Midland Main Line.
- In July 2009 the DfT announced outline plans to electrify the Great Western Mainline between London and Swansea at a cost of around £1bn, and between Manchester & Liverpool via Huyton & Newton-le-Willows at a cost of £100m. Prior to this ATOC had identified a number of infill schemes which could be achieved before 2014 and which would provide considerable rolling stock benefits for limited capital expenditure by allowing electric fleets to be used more effectively. The confirmation of both the Great Western (to Bristol/Cardiff) and Liverpool – Manchester schemes was particularly welcome, and the further announcement made in December 2009 for additional enhancements to include Manchester to Preston via Bolton, Preston to Blackpool North and from Wigan to Liverpool via St Helens maximises the benefits delivered by these infill schemes. They add considerable extra capacity and future flexibility to all operators in the North West.
- ATOC also recommends that as well as taking forward the proposals for the electrification of the Trans-Pennine Northern Main Line and Midland Main Line the Cross Country network should also be evaluated as a matter of priority in order to maintain the momentum and to avoid cost 'spikes' as result of 'stop-go' planning. The Trans Pennine would provide an important electrified west - east link from Liverpool to Newcastle and beyond whilst the Midland Main Line scheme would deliver an important upgrade for this key route serving the East Midlands and South Yorkshire. The Midland Main Line is also an essential precursor to development of the Cross Country route which would provide important regional north – south links. We also believe that plans for suburban and infill electrification schemes in the conurbations of Leeds, Liverpool, Manchester, Birmingham and Cardiff should be taken forward for detailed evaluation.
- As noted beforehand ATOC believes that the Midland Main line should be the next main line route-wide scheme, extending the electrification northwards from Bedford to provide the London to Sheffield/Nottingham corridor with electric main line services.
- The welcome development and progress of schemes on electrification are also driving down the costs of electrifying a route and are also allowing improved integration of rolling stock plans, delivering further efficiencies. Operators will continue to be closely engaged in the work to meet these challenges, particularly as the allocation of rolling stock plays a key part in delivering these improvements.

Relevant ATOC activity

- ATOC has been actively working with the DfT and Network Rail on the case for electrification and the evaluation of suitable schemes. ATOC has also identified a number of infill schemes as part of this work and some of these have now been authorised by the DfT. ATOC will continue to campaign for potential viable schemes such as the TPE route from Manchester via Leeds to York.
- There is major ATOC and train operator input into the Interim Industry Plan. This will inform the next High Level Output Strategy which will define (amongst other things), future capacity and route investment from 2014 onwards.
- ATOC continues to press for electrification investment in association with a franchise-led rolling stock strategy which, through a new and cascaded electric

rolling stock plan, will underpin a coherent strategy for increased capacity and service improvements.

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September 2011