

This month, the focus of the column continues to be on electrification, with a disappointing reversal of sentiment but some encouraging news on the never-ending challenge to get costs down. And, as a diversion from the heavy-duty technical and commercial base-load of the column, I look at the phenomenon of advisory panels and who gets to sit on them.

Electrification – prove you can deliver demands DfT.
Wigan-Bolton – NEEP goes in hard.
Advisory panels proliferate.

A neologism which caught my eye the other day is ‘vibe-shift’. This refers to a dramatic cultural change that makes current trends feel dated. I found it interesting because it is not limited to cultural change.

For the past couple of years, the electrification ‘vibe’ has been increasingly positive as industry has emerged from the embarrassment of the Great Western Electrification Project (GWEP) fiasco and the associated cancellations/truncations of schemes. Driving this positive mood has been the hard work from Network Rail and the Railway Industry Association (RIA), not forgetting the Rail Industry Decarbonisation Task Force, which set the ball rolling in 2019.

Backing these policy statements has been the engineering focus on eliminating the need to replace bridges and structures to provide clearances for 25kV electrification. This work has resulted in a recent Permanent Way Institute Seminar on electrical clearance being told that bridge reconstruction should, in future, be the very last of last resorts – applying to less than 5% of the Network Rail estate.

In a further boost to the optimism level, in its July 2021 Transport Decarbonisation Plan (TDP) the Government had said ‘We will deliver an ambitious, sustainable, and cost-effective programme of electrification guided by Network Rail’s Traction Decarbonisation Network Strategy’.

This was further reinforced by qualified commitments in the Integrated Rail Plan (IRP) to electrification throughout the Trans-Pennine Route Upgrade (TPRU), plus extension of the Midland Main Line electrification to Sheffield.

But, while welcome, two projects over the next 10 years do not a rolling programme make. Industry has continued to argue that it needs the long-term certainty of a rolling programme to support the investment in skills and equipment to get costs down. Unfortunately, it seems that this latest pleading has not gone down well with the Treasury.

And I can understand officials saying ‘show you can deliver with TPRU and MML and then come back for more’. Meanwhile chums campaigning for a rolling programme, have been criticised for ‘moaning about electrification’ from within both DfT and Network Rail.

Another sign of vibe-change has been the increased promotion of hydrogen and battery power as an alternative to electrification. This was reflected in the minutes of the 2 December Network Rail Board Meeting.

An item noted. there had been ‘a low level of rail focus at COP26’. However, the presence at Glasgow Central station of both hydrogen and battery powered trains did generate interest’.

According to the Minutes, ‘one issue’ that emerged from discussions at the events ‘was the value of exploring options for wider use of hydrogen for freight trains if the economics could be made to work’. Since the Board meeting, Birmingham University has been commissioned to validate previous assumptions on the capabilities of hydrogen for freight traction.

Next month I will have to revisit my hydrogen Deltic.

Wigan-Bolton - cost cutting in action

Central to the drive to make electrification affordable is the National Electrification Efficiency Panel (NEEP). Commissioned by the Department for Transport at the end of 2021, and chaired by veteran British Rail civil engineer Prof Andrew McNaughton, the Panel’s initial focus has been the TransPennine Route Upgrade.

Back in the November 2021 column I reported on the recently authorised Wigan-Bolton electrification scheme. At the quoted cost of £78 million for 21 single track km (stkm), the unit cost was a third more expensive than even the Great Western Electrification Programme.

According to the press release announcing the scheme, ‘The upgrade project will provide 450 new overhead line equipment stanchions, and modifications to 17 bridges and two-level crossings’.

But, as we learned at the PWI Seminar, significant strides have been made in reducing electrical clearances at structures. According to Informed Sources, application of this engineering activity has resulted in a substantial reduction in the cost of electrification-related work in the Wigan-Bolton scheme. Without the reported 150% overhead on the actual project costs, the physical work on site, including those ‘modifications to 17 bridges’, came to around £30million.

Application of the new approaches to clearances, means that only one bridge will now require reconstruction for electrical clearance. Two more will need to be reconstructed because of condition. At a stroke, this has reduced the cost to under £15million, or around the £750,000/stkm, which the RIA study thought should be achievable on simple schemes.

Advisory panels examined

An Advisory Panel has been appointed for the Great British Railways Transition Team (GBRTT) and has met for the first time under Chairman Keith Williams. According to the GBRTT, the panel has been appointed to 'oversee, steer and advise the transition team responsible for creating Great British Railways, the new public body that will bring the railways back together and end a quarter century of fragmentation'.

As for its members, 'they have a wealth of knowledge, skills and leadership experience from across rail and the wider transport sector, as well as infrastructure, business, digital, technology and retail sectors. They will work collaboratively with the GBRTT leadership team 'to help them deliver a more sustainable railway that better serves the needs of passenger and freight customers'.

Apart from the fact that the structure of this new railway is riddled with known unknowns and we don't even have a sniff of the contents of the required Bill, I thought I would research the backgrounds of the Advisory Panel's members to see what they bring to such a fundamental reorganisation.

The results are in the column. But I reckon that at least three could be replaced by people who would bring more-relevant experience and fill in some glaring gaps in the Advisory Panel's collective experience. In a positive mood, I recommend some potential candidates.

East-West

Now, you can understand a massive task like reorganising the railways needing an advisory panel. Crossrail has an Independent Advisory Panel, but its task has been to provide an 'additional independent perspective and act as a resource for the executive team and the board, to provide insight on areas of critical concern'. Examples have been software configuration, supply management, readiness to operate a railway and planned opening schedules. Really serious stuff.

On a slight smaller scale is East West Rail (EWR), which recently announced that it has also set up an advisory panel. This group brings together 'the brightest and the best across a range of industries to act as a sounding board for new ideas and initiatives'.

EWR's Engineering Director explained the rationale for the Panel: 'we don't want this to be just another railway. As the East West Rail project progresses and East West Railway Company continues to expand, we're keen to fulfil our remit of positively disrupting the rail industry - to be bold and different and to challenge industry norms with a focus on local communities and customers right from the beginning of the project'.

Oh dear. That said, two members of the panel bring just the relevant, if boring, experience, EWR might need. Rachel Skinner is president of the Institution of Civil Engineers and is an Executive director at consultants WSP. Her fellow panellist, Giles Thomas, is High Speed 2's Engineering Director for Phase 1 of the route.

But going through the rest of the panel my eyebrows started rising, reaching their apogee with a co-founder of Hardt Hyperloop? What he's going to make of Class 196 DMUs purring along a brand new 21st Century railway is an interesting thought.

It is, of course, too easy to make fun of such high falutin' prose, when, as that well-known railway expert Mariah Carey put it 'All I want for Christmas is a two track electric, railway linking Oxford and Cambridge'. But I have a serious point in highlighting such panels.

Why does the railway industry think it necessary to bring in people with no experience of designing, building or running a unique form of transport, to advise its poor, benighted engineers and managers?

On a recent visit to Anglia Region's Liverpool Street Integrated Electric Control Centre (IECC) I was shown the storyboard for the Region's 21st Century Operations project. At the left of the display, setting the scene for what was being achieved, was a quote from Network Rail Chief Executive Andrew Haines, taken, I believe from a speech at our Golden Whistles awards for operational excellence: "Why on earth does it take someone else to tell us about these issues".

Andrew was talking about operational problems, but I see it as a rallying call applicable to most aspects of today's railways. You wouldn't call in a plumber to re-wire your house.

New Train TIN-Watch

For followers of my monthly report of new train reliability, this month sees a double reset. Because the reliability data is based on the four-week railway accounting Periods, while Modern Railways is published monthly, we eventually get to the situation where Periods are running ahead of the monthly cycle and it is time to get back in step by publishing the results for two Periods.

This year, the re-set also provides the opportunity to update the criteria for the leaving the Table and purge some entries.

While 20,000 Miles per Technical Incident Moving Annual Average (MTIN MAA), remains the yardstick for promotion from the table, there are some fleets which are still improving, but have been around for a long time and are hardly 'new trains'.

It is generally reckoned that 15,000 MTIN MAA is the level at which the rolling stock fleet is no longer a significant factor in an operator's train service reliability. At the same time, the typical warrantee period for new trains is two years.

So from now on, any fleet which has been in service for more than two years and is achieving 15,000 MTIN MAA will leave the table. The table for Period 11 has an extra column showing the time each fleet has been in service.

Roger's blog

It's been refreshing to get out and about at last. As I expected, the Golden Whistles Awards morning conference was an absolute cracker. The selection of excellent presenters covered a range of important topics and it was good to meet people in the flesh again, rather than on the other side of the screen.

There was also the chance for random meetings which raise new topics and lead to invitations for follow-up meetings.

My long awaited visit to Liverpool Street IECC to see how Luminate Integrated Traffic Management is helping Anglia Region's pioneering development of the 21st Century Operations concept was a real eye-opener. As is often the case, you read about a concept like 21st Century Ops, but to be taken through it in detail by the enthusiastic young managers responsible is a different matter altogether.

As soon as this blog is off the word-processor, I'll be writing up this visit.

That's all for now,

Roger

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