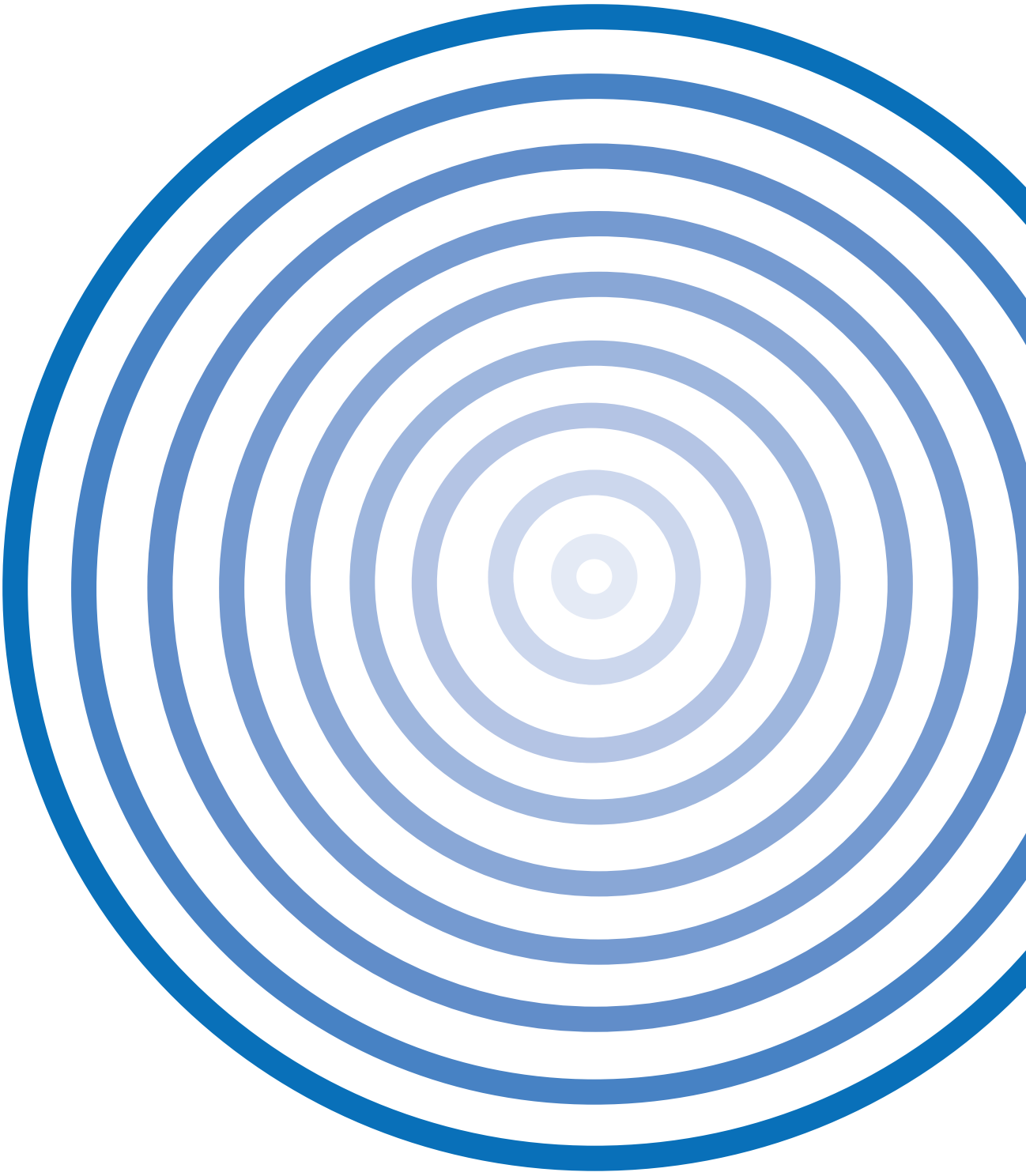
Office of Rail Regulation

Independent Reporter Services (Part C)

Delivery plan power supply assessment: review of progress issued by the Office of Rail Regulation on 16 November 2009

Executive Summary



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Executive summary

Introduction

In November 2009, the ORR asked the Reporter to undertake a further review under the Part C Reporter Mandate 'Delivery plan power supply assessment: review of progress'. This second traction power mandate (November 2009) was to establish how much progress Network Rail had made on delivery against the actions from the report on the first traction power mandate (May 2009) and to update this in the light of new information. The Reporter was asked to carry out the second traction power mandate (November 2009) in two parts.

Completed in January 2010, the second traction power mandate (November 2009) Part 1 report reviewed Network Rail's progress in delivering the agreed action plans arising from the first traction power mandate (May 2009) report. The Reporter found that Network Rail had made some progress in delivering its action plans, however its assessment and planning of the traction power strengthening work required for CP4 were not yet robust.

Part 2 of the second traction power mandate (November 2009) was to:

- investigate Network Rail's current assessment of whether it needs to strengthen traction power supply systems anywhere on the network to deliver the High-level output Specification (HLOS) and other commitments
- provide the Reporter's opinion on whether Network Rail's assessment of traction power supply requirements is robust.

This report covers both Parts 1 and 2 of the second traction power mandate (November 2009).

Background

In July 2007, the Secretary of State for Transport issued a Rail White Paper, 'Delivering a Sustainable Railway', identifying the future needs that the railway is likely to have to meet over the next 30 years. It incorporated the first HLOS that the Secretary of State wished the railway industry to deliver over the period from April 2009 to March 2014, known as Control Period 4 (CP4).

Network Rail's response to the White Paper was included as part of its Strategic Business Plan (SBP) published in April 2008. The ORR published its Final Determination[1] in October 2008, including assessments on the affordability of the HLOS for the railway in CP4 for England and Wales and Scotland established by, respectively, the Secretary of State for Transport and Scottish

[1] Periodic Review 2008 - Determination of Network Rail's outputs and funding for 2009-14.

Ministers. This included traction power supply strengthening work in CP4. Network Rail accepted the Final Determination in February 2009.

In March 2009, Network Rail published its first Delivery Plan (March 2009 Version)[2] setting out the detailed outputs it proposed to achieve within CP4 and its plans for operations, maintenance and renewals. This included the CP4 Delivery Plan 2009 Enhancements Programme and traction power supply enhancements, funded by the Final Determination.

Conclusions

Network Rail's assessment

Network Rail has learned some key lessons from its development of CP4 traction power requirements and is currently implementing the relevant changes. Together with its proactive longer-term approach to planning traction power, their implementation will help develop its confident prediction[3] for CP5.

Although the Reporter has not made any assessment of the quality or completeness of the traction power route strategies, we would agree with Network Rail that the strategies should take a longer-term view and span several control periods.

The assessment work being carried out by the National Specialist Team (NST) for traction power design within Network Rail is competent, professional and appropriate, and delivery has improved due to the additional resources and better workload planning. Some further work is required to complete the on-going development of NST procedures and standards.

Network Rail has made good progress in respect of the eight 'Network Rail's assessment' recommendations arising from the first traction power mandate (May 2009) report. It has completed the agreed action plans on four recommendations: Recommendation 1 (priority) - programme management resources; Recommendation 2 (priority) – national traction power supply strategy; Recommendation 3 (priority) – database of planned traction power supply strengthening proposals; and Recommendation 5 – engineering focus. There is evidence of good progress on two recommendations: Recommendation 7 – NST modelling procedures and Recommendation 8 (priority) – electrification asset information. There is evidence of some progress on Recommendation 6 – NST design standards and no evidence of progress on Recommendation 4 (priority) – certified quality management system.

2 CP4 Delivery Plan 2009 Enhancements Programme: statement of scope, outputs and milestones.

3 Defined by Network Rail as its satisfaction that it has correctly identified all required enhancements works and that the outputs of this modelling and analysis are correct.

Delivery Plan

The Delivery Plan is a key industry document as it provides clarity to rail users, funders and other industry stakeholders on Network Rail's plans as they affect them. It is the basis against which the ORR monitors Network Rail's delivery of its obligations. As such, it must be kept up to date.

Network Rail's management of the traction power elements of the Delivery Plan has improved; there is much more clarity about the structure and content of the Delivery Plan. There is good change management and control that is applied consistently and with its new process, there is the basis for good monitoring and reporting.

However, there remain some issues. The published plans for Routes 5 and 7 are not yet robust and are known to be at risk[4], primarily owing to the dependency on EDF works. There is evidence that Network Rail provides the ORR with regular reports on its enhancements projects through the ERM Report, selected projects-on-a-page reports and meetings. Whilst reports exist for the Periods 11, 12 and 13, the Anglia Routes power supply upgrade report was omitted from the Period 12 project-on-a-page report pack. Network Rail also provides regular updates on the Anglia Routes power supply upgrade to NXEA by means of its regular HLOS and Enhancements Meetings.

Network Rail has made strong progress in respect of the four 'Delivery Plan' recommendations arising from the first traction power mandate (May 2009) report. It has completed the agreed action plans on three recommendations: Recommendation 9 (priority) – re-issue up-to-date Delivery Plan; Recommendation 10 – GRIP stages; and Recommendation 12 – progress reporting. There is no evidence of progress on Recommendation 11 – project documentation references.

Anglia Routes 5, 6 and 7 – power supply enhancements

The proposed solution for Route 6 is robust and there is some confidence that Network Rail can meet its completion milestone of December 2011.

The proposed solution for Route 5 is not robust due to the issues at Northumberland Park, and there is, as yet, no robust solution proposed for Route 7.

We have less confidence about the on-time delivery of the completion milestone commitments for Route 5 (due to the issues at Northumberland Park) and Route 7 (due to the issues at Colchester).

[4] The anticipated delivery dates for both of Route 7 options under consideration do not meet the published Delivery Plan milestone (Anglia Routes 5, 6 & 7 – Delivery Schedule, dated 26/03/10).

There are significant risks with the delivery of these works, mainly owing to the dependency on EDF works. These include:

- the scope of works to be undertaken by EDF has yet to be understood at both locations
- the work on Route 7 may involve 15 months (or more) lead-time to order and deliver the necessary transformer
- EDF reports that the significant number of Anglia Route applications made by Network Rail and the likely orders would result in a substantial workload for them, particularly with respect to the EDF 132kV system modelling work required to undertake the specialist disturbance studies.

Minimising the need for such specialist disturbance studies by other means such as on-site testing may reduce the need for some marginal Distribution Network Operator (DNO) and National Grid works and thereby have a beneficial impact on timescales.

Earlier engagement with and notification of future rail network requirements to the DNOs and National Grid would ensure more robust planning for additional railway loads within their programme of upgrade works and thereby minimise any risk and impact to Network Rail's project delivery timescales.

Wider issues

Network Rail is putting in place some key building blocks that will enable it to robustly manage and control its traction power portfolio. These include a clear governance and organisation structure, a strategic portfolio approach to the management of traction power projects, including the management of risk, traction power route strategies and sharing the lessons learned from projects, such as the WCML Supply Upgrade, with ongoing traction power projects.

The establishment of the National Programme Team will enable better co-ordination of the prioritisation, development and delivery of the CP4 portfolio.

The development of a revised business plan for the traction power strategy will be an important step in the delivery of traction power projects in CP4 as well as provide important learning for CP5. In particular, the completion of the following activities will be crucial in making the CP4 traction power portfolio robust:

- the review of the CP4 traction power portfolio
- the development of generic planning and estimating tools
- the delivery of a clear business plan for CP4 traction power in June/July 2010.

It is essential for both CP4 and later control periods that Network Rail continues to carry out thorough lessons learned exercises and shares the lessons with ongoing and future projects.

Network Rail has made good progress in respect of the six 'wider issues' recommendations arising from the first traction power mandate (May 2009) report. It has completed the agreed action plans on five recommendations: Recommendation 13 (priority) – clearly defined governance structure; Recommendation 14 – sharing lessons learned; Recommendation 16 – strategic 'joined-up' approach; Recommendation 17 – programme-level risk management; and Recommendation 18 – change control. Some progress was noted on Recommendation 15 – holistic approach for system efficiencies.

Recommendations

Network Rail's assessment

1. Network Rail ensures that key lessons from the development of CP4 requirements are applied in the delivery of CP4, where it is appropriate and in the development of CP5 requirements.

2. The NST develops a Network Rail specification titled 'National Traction Power Supply Strategy' to specify:

    - the requirement for route traction power strategies
    - the aspects and future timescale that they should address
    - any known specific issues that require addressing for each route
    - the policy on issues such as project provision of spare traction power supply capacity or 'headroom' over and above that required to deliver a specified train specification
    - the processes and timescales to be followed for the continued development and review of the strategies.

3. Network Rail reviews its liaison arrangements with National Grid and DNOs and ensures:

    - there is better awareness of respective longer term plans
    - key risks and issues are identified earlier and dialogue commences in good time
    - robust and timely planning of long-lead items, such as network outages and transformers.

4. The NST acts to:

   - complete the draft electrification system design guidance note for AC electrification system design
   - develop a similar guidance note for DC electrification system design
   - include guidance on the level of electrification system modelling appropriate for GRIP Stages 1 to 5 in the design guidance notes.

5. The NST reviews the design processes specification and the completed guidance notes to ensure that all the requirements of the electrification system design process and criteria are captured in the specification, including those for electrification system modelling.

6. Network Rail completes its action plan for Recommendation 4 from the first traction power mandate (May 2009) report in respect of implementing a certified quality management system to part of its organisation, such as the NST.

Delivery Plan

7. Network Rail ensures that the Delivery Plan is kept up to date, including clearly identifying where commitments, activities and milestones might be at risk in order that all stakeholders are kept informed

8. Network Rail demonstrates completion of its action plan for recommendation 11 from the first traction power mandate (May 2009) report in respect of document references within the Delivery Plan.

Anglia Routes 5, 6 and 7 - power supply enhancements

9. Network Rail accepts formal offers from EDF as soon as practicable so that EDF can commence the feasibility work.

10. Network Rail reviews and updates, where appropriate, the milestones for its published Delivery Plan commitments on Routes 5 and 7.

11. Network Rail determines the optimum time to engage and notify the DNOs and National Grid on its future requirements for additional railway loads.

Wider issues

12. Network Rail briefs the ORR on the completion of its traction power business plan due in June/July 2010.

13. Network Rail ensures that thorough lessons learned reviews, such as that carried out for the West Coast Power Supply Upgrade, are routinely carried out and the key lessons shared with ongoing projects.

The Reporter's Opinion

Network Rail has made strong progress since the first traction power mandate (May 2009) report. In particular:

- the assessment work carried out by the NST continues to be very competent, professional and appropriate; delivery has improved with additional resources, better workload planning and the ongoing development of NST procedures and standards
- Network Rail's management of the Delivery Plan has improved although there are some issues with regard to ensuring it is up-to-date and clearly identifying where commitments, activities and milestones may be at risk
- the proposed solution for Route 6 is robust
- the establishment of the National Programme Team for traction power, consisting of national client, programme sponsor, programme manager and technical lead will enable better co-ordination of the prioritisation, development and delivery of the CP4 portfolio.

However, in overall terms, Network Rail's assessment and plans for the Anglia Routes are not yet robust because:

- the proposed solution for Anglia Route 5 is not yet robust due to the issues still to be resolved at Northumberland Park
- there is, as yet, no proposed solution for Anglia Route 7 (in the Colchester area)
- there are significant risks to delivery of the published committed dates for Anglia Routes 5 and 7, mainly in regard to the dependency on EDF works
- the Delivery Plan (March 2010 Update) does not currently reflect Network Rail's anticipated delivery date for Anglia Route 7.

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