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Structure of Costs and Charges Review: Emerging Conclusions

1. This letter sets out our emerging conclusions on the structure of costs and charges (SOCC) review in respect of possible revisions to franchised passenger train operators (TOCs) track access charges in April 2006.
2. We commenced the SOCC review in November 2004 with the publication of the initial consultation document¹. In that document we stated that the principal objective of the review is to obtain a better understanding of Network Rail's costs. There are three main reasons for obtaining this understanding:
 - to consider the implications for TOCs' track access charges;
 - to develop an Infrastructure Cost Model (ICM); and
 - to support allocation of Network Rail's costs to devolved administrations and other local and regional bodies.
3. The timing of implementation of any revised charges is a central element of the SOCC review. Our second consultation document² confirmed that we would consider the findings of the reviews of the individual charges and consider whether to implement changes in April 2006 or at a later date, e.g. at the start of Control Period 4 (CP4) in April 2009 following the Periodic Review 2008 (PR2008), possibly in conjunction with wider changes to the charging framework.

¹ *Structure of Costs and Charges Review: Initial Consultation Document*, Office of Rail Regulation, November 2004. The document can be accessed at <http://www.rail-reg.gov.uk/upload/pdf/213.pdf>.

² *Structure of Costs and Charges Review: Emerging Views on Key Issues*, Office of Rail Regulation, April 2005. The document can be accessed at <http://www.rail-reg.gov.uk/upload/pdf/229.pdf>.

Paul McMahon, Deputy Director, Regulatory Economics

Telephone 020 7282 2095 • Fax 020 7282 2046
E-mail paul.mcmahon@orr.gsi.gov.uk

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Emerging conclusions

4. The initial consultation stated two main reasons for reviewing franchised passenger train operator charges at this time:

- there is prima facie evidence that costs and variable charges may have diverged following the Access Charges Review 2003 (ACR2003), when the increase in Network Rail's revenue requirement was funded through increases in fixed charges and direct grants, with no increase in variable charges; and
- since the last structure of charges review at the Periodic Review 2000 (PR2000) the industry has gained further knowledge on rolling contact fatigue (RCF) and rail wear that is not reflected in current charges and which may have a material bearing on overall variable costs and charges as well as the relative level between vehicles.

5. Since we started the SOCC review in November 2004 we have undertaken (and are continuing with) a range of studies to review and consider revisions to the current track access charges³:

- variable usage and electrification asset usage charges;
- traction electricity charges;
- capacity charges; and
- fixed charges.

Variable usage and electrification asset usage charges

6. In December 2004 we engaged Booz Allen Hamilton (working in conjunction with TTCI (UK) Ltd.) to undertake a review of the existing variable usage and electrification asset usage charges and to make recommendations on whether any revisions are appropriate. Booz Allen Hamilton (BAH) and TTCI have now completed their study and in parallel with this letter their final report is published on our website⁴.

7. The three main areas of BAH's and TTCI's study have covered:

- a review the overall level of variable charges through reviews of the level of cost variability and determining the relevant cost base to apply this variability to;
- development of possible terms to introduce to the variable charging model to take explicit account of RCF and rail wear for each vehicle type; and

³ We are also undertaking studies on environmental and scarcity charges in order to develop a better understanding of the implications of implementing these charges.

⁴ *Review of Variable Usage and Electrification Asset Usage Charges: Final Report*, Booz Allen Hamilton and TTCI (UK) Ltd., June 2005. The report can be accessed at http://www.rail-reg.gov.uk/upload/pdf/bah_elecreport_fin.pdf.

- considering changing the basis of the electrification asset usage charge from being a mark-up on the traction electricity charge to vehicle based (per mile) charges for AC and DC separately.

Overall level of variable charges

8. In their initial report⁵ BAH and TTCI recommended that at present the current approach to deriving the variable charges should be retained. In the variable charge model, the total variable element of Network Rail's forward-looking efficient costs, by asset category, is allocated across each vehicle type based on the share of "equivalent" gross tonne miles (GTMs) for that vehicle. This approach was developed and applied at PR2000 when the variable usage charge was last revised.

9. Both BAH/TTCI and ourselves, as well as others in the industry, recognise that a bottom-up engineering based approach is the preferred method of determining variable costs and charges. However, for the purposes of this review, for a possible implementation of revised charges in April 2006, BAH and TTCI recommended, and we accepted, that the quality of Network Rail's data and knowledge on cost causation is insufficient to support a bottom-up approach and therefore the existing approach should be retained. This approach was broadly supported by respondents to both our initial and second consultation documents.

10. Throughout the review BAH and TTCI have worked with Network Rail to try to determine the overall level of cost variability. Although there has been some improvement in disaggregated cost data over recent years there are concerns about its current robustness. Network Rail recognises that further work would be required to develop the robustness of cost estimates.

11. In addition to the assessment of variability, BAH and TTCI consider that there is uncertainty about the cost base which should be applied to any new assessment of variability. The cost base should reflect achievable forward looking levels of efficiency and exclude backlog expenditure. BAH and TTCI have argued in their final report that this level should be the 2013/14 cost base (i.e. the final year of CP4) reported in Network Rail's 2005 business plan, although they recognise that this expenditure level has not been subject to regulatory scrutiny, does not necessarily assume steady-state expenditure and is not based on an appropriate assessment of efficiency.

12. BAH and TTCI have also found that there appears to be significant differences of costs (and by implication charges) across different routes according to traffic density.

13. Notwithstanding Booz Allen's concerns, the combination of the increase in the overall cost base from that used in the current charge calculations and the best estimate of cost variability determined in the review would result in an increase in total variable costs (in

⁵ *Review of Variable Usage and Electrification Asset Usage Charges: Initial Report*, Booz Allen Hamilton and TTCI (UK) Ltd., January 2005. The report can be accessed at http://www.rail-reg.gov.uk/upload/pdf/bah_variable-usage-initial-report_jan05.pdf.

relation to passenger traffic) from around £180 million per annum to around £280 million per annum.

14. The key conclusion of the BAH and TTCI study is that the implementation of changes to usage charges should be deferred until PR2008, so that, in particular, further work on understanding variable cost causation can be undertaken to ensure that track access charges are sufficiently cost-reflective and provide appropriate incentives.

15. We are minded to accept the BAH and TTCI recommendations and therefore propose not to revise the variable usage charge in April 2006. We propose to hold the charge unchanged for the remainder of Control Period 3 (to 31 March 2009), make revisions as part of PR2008 and implement revised charges in April 2009.

16. The benefits of deferral are that we will be able to:

- avoid unnecessary volatility in variable charges. If we made changes in April 2006 there is a possibility that a new efficient cost base determined at PR2008 and a better understanding of cost variability would mean that charges may need to be adjusted significantly, and possibly downwards, again. Because, to a large extent, we are dealing with incentives concerning long term decisions and long lived assets stability of charges is important;
- take account of the more detailed work on cost causation that Network Rail will have to undertake as part of PR2008 and development of the ICM;
- ensure that the overall cost base used as the basis for charges is set at efficient levels;
- consider the different levels of costs by route, which the BAH and TTCI work is revealing, and the implementation of route specific charges;
- allow the further work to consider both passenger and freight charges; and
- consider whether to move to an overall revenue control for Network Rail to be established in the licence, with charges determined by Network Rail on the basis of criteria that are subject to regulatory oversight, and with the charges audited by ORR.

17. Our emerging conclusion is supported by many respondents to our second consultation document. TOCs, the freight industry and Network Rail consider the April 2006 target for implementing a new charging structure too ambitious. Many respondents consider that Network Rail's information and understanding of costs is still limited and that deferral would allow more reliable information to be gathered on the costs and cost drivers of operating maintaining and renewing the network.

Rolling contact fatigue / rail wear

18. The impact of RCF and rail wear is not explicitly reflected in individual charges in the current variable charge model, though to the extent that the cost related to these factors is

variable it is spread across all vehicles. BAH and TTCI have developed new terms for the variable usage charge model to allocate the cost to each individual vehicle.

19. The overall effect of including “rail surface damage” in the model would be a comparatively small level of re-balancing of charges between passenger vehicles. The findings from BAH and TTCI are that the change to the charge for the majority of the 134 passenger vehicles in the current price list would lie between a decrease of 15% and an increase of 5%. In addition to this, there would be a small overall shift away from the passenger to the freight vehicle fleet.

20. BAH and TTCI considers that there remain some uncertainties with the rail surface damage model and, certainly, more work needs to be undertaken before it is applied to freight.

21. While we broadly accept the principles underpinning the BAH and TTCI work in this area we consider that it is not appropriate to make these changes to the existing variable usage model by themselves, given the wider uncertainties on cost causation. The further work over the next few years on understanding cost causation and also giving further consideration to route based charges will enable us to refine this work further if necessary. Moreover, we want to ensure that the proposals in this area are subject to thorough review by, and discussion with, the industry before implementation.

Electrification asset usage charge

22. At present electrification asset usage costs are recovered through a mark-up to the traction electricity charge. BAH and TTCI have recommended that in order to make this charge more cost reflective it should be based on a per vehicle mile rate, differing for AC and DC powered vehicles.

23. We accept the BAH and TTCI proposals to alter the basis of this charge. However, given the wider uncertainty about cost variability and the appropriate cost base, and because this is a comparatively small cost (currently around £13 million per annum), we propose not to make this change to the structure of charges until April 2009. In addition, the further work on cost causation and the development of the ICM, the long term efficiency analysis at PR2008 and further consideration of route based charges will enable us to refine the analysis, if necessary.

Traction electricity charge

24. The traction electricity charge is designed to enable Network Rail to recover the costs incurred as a result of supplying electricity to train operators for use by their vehicles on the network. The charge is intended to be cost reflective, and the price list is differentiated by region and time of day. In the absence of on-train metering, modelled consumption rates have been identified for particular vehicle types on particular routes.

25. We asked AEA Technology (AEAT) to review the vehicle consumption rates. AEAT's two reports are published simultaneously with this letter⁶. AEAT are proposing a small number of changes to current consumption rates. We would like train operators and others to review the details, contained in the stage two report, for vehicle types for which they have information and respond to us if they have concerns with the AEAT recommended changes.

26. We are still examining Network Rail's submission to us on making changes to the traction electricity price list, established at PR2000, which includes considering the appropriate index to use to reflect Network Rail's costs of procuring traction electricity.

27. In the draft conclusions we intend to publish in September 2005 we will set out our specific proposals in respect of changes to the current consumption rates and on possible changes to the traction electricity charges.

28. We are also undertaking a study to assess the appropriate discount for regenerative braking. On the basis of the study we are not intending to make any changes at this time to the current discount (16.5%). We will discuss this study in more detail in the draft conclusions document in September 2005. We will also publish the consultant's report at that time.

Capacity charge

29. We do not intend to make any changes to the capacity charge. In the second consultation document we re-iterated our view that the charge should remain as a variable charge, since expected costs through the performance regime (Schedule 8 of track access contracts) increase with additional usage of the network. However we recognise that without changes to Network Rail's billing systems it will be unable to make significant improvements to the accuracy of the charge at this time.

30. We are continuing to discuss the capacity charge with Network Rail. We intend to set out in the draft conclusions the required improvements Network Rail will need to make in the next two years, which could facilitate a more cost reflective capacity charge from 2009 onwards. We will therefore continue to develop options for implementation of a more sophisticated capacity charge as part of PR2008 and will continue to discuss this with the industry.

⁶ *Review of Electricity Consumption of Railway Vehicles: Stage 1 Report*, AEA Technology, April 2005. The report can be accessed at http://www.rail-reg.gov.uk/upload/pdf/aea_elecreport_one.pdf. *Review of Electricity Consumption of Railway Vehicles: Stage 2 Report*, AEA Technology, May 2005. The report can be accessed at http://www.rail-reg.gov.uk/upload/pdf/aea_elecreport_two.pdf.

Fixed charge

31. In our second consultation document, we stated that we were undertaking a study to scope out the advantages and disadvantages of two alternative approaches to developing a revised set of fixed charges. These two approaches are either an update of the existing model or the development of an “avoidable” cost by TOC approach. The avoidable cost approach is a more cost reflective approach to determining the fixed charge for each individual operator on the basis of the specific costs they impose on the network (and a mark-up for common costs). It also provides important signals to funders.

32. We have asked AEAT, who are undertaking this study, to develop the avoidable cost approach. AEAT is currently finalising its analysis and report. We will discuss this work further in our draft conclusions in September 2005 and publish AEAT’s report at the same time.

33. We do not intend to make any changes to the fixed charge in April 2006, pending further work on understanding cost causation. However, we expect that AEAT’s work will inform consideration of the principles of fixed charge allocation and will provide useful information for the development of the ICM.

34. Respondents to the second consultation document that commented on this issue, including the DfT/SRA and Network Rail, broadly support the proposals to develop the avoidable cost approach. However First Group as the only TOC to express a firm view on this issue favoured continuation (and refinement) of the existing approach.

Next steps

Industry seminar

35. In conjunction with these emerging conclusions, we are holding an industry seminar on Friday 22 July 2005 at City University.

36. We see the seminar as providing a key opportunity to discuss with the industry the work that we have undertaken to date and the important work that ORR, Network Rail and others need to undertake over the next few years to improve the modelling of cost causation, and develop charges, as part of PR2008.

37. Invitations for the seminar have been sent out. However, if you did not receive an invitation but are interested in attending please contact Debbie Daniels at ORR (debbie.daniels@orr.gsi.gov.uk, tel: 020 7282 2066).

Improving understanding of cost causation

38. While Network Rail has improved the availability and quality of data and knowledge of cost causation since PR2000, the work that BAH and TTCl have undertaken has revealed limitations in Network Rail’s understanding of cost causation. The company accepts that it needs to intensify its efforts so that a robust cost submission and access charges can be developed for PR2008. This understanding will also allow Network Rail to improve its asset management planning more generally. The work Network Rail needs to undertake

includes development of the ICM and associated improvement in its current decision support tools such as T-SPA. A key part of this is to ensure that the improved understanding is at a route level and we will work with Network Rail to ensure this.

39. We are currently working with Network Rail and DfT to develop the technical specification of the ICM by September. In addition to this, Network Rail has agreed to provide a preliminary version of the ICM by December 2005, ahead of the initial version that will be produced in spring 2006.

40. We set out our initial views on the required functionality of the ICM in chapter 5 of our second consultation document. The consultation responses endorsed the development of the ICM and the proposed functionality.

Draft and final conclusions

41. We intend to publish draft conclusions on the SOCC review in September 2005. The draft conclusions will contain our final proposals in respect of any revisions to charges in April 2006, following responses to these emerging conclusions and the industry seminar.

42. The draft conclusions will provide updates on the studies that are still ongoing and not discussed in this letter, such as the avoidable costs study and the studies on environmental and scarcity charges. We will also provide a summary of our July seminar and discuss options for making wider changes to the charging framework.

43. In addition to this we intend to set out in further detail a workplan for continuing the work on the structure of costs and charges as part of PR2008, including development of the ICM.

44. In line with the timetable we set out in the initial consultation document we plan to publish final conclusions in December 2005 with respect to any changes to charges in April 2006.

Freight charges review

45. In our 2005 business plan we have stated that we intend to start a review of freight charges in the second half of 2005/06, although we have given a previous policy commitment that freight charges would not change before April 2007.

46. In the light of the findings of the current SOCC review we now propose not to undertake a specific freight charges review and make possible changes to freight charges in April 2007. Rather, we plan to take forward the review of freight charges as part of PR2008 alongside the further work on passenger charges, as outlined above, and make changes in April 2009.

Reponses to this letter

47. We welcome views on any issues raised in this letter. Responses should be sent in both electronic and hard-copy format by 31 August 2005, to:

Paul McMahon
Deputy Director of Regulatory Economics
Office of Rail Regulation
1 Waterhouse Square
138-142 Holborn
London EC1N 2TQ
Email: paul.mcmahon@orr.gsi.gov.uk

48. Responses will be made available in our library, published on our website and may be quoted from. Respondents should indicate clearly if they wish all or part of their response to remain confidential. Where a response is made in confidence, a statement summarising the submission should accompany it, but excluding the confidential information, which can be treated as above, we will also publish the names of respondents in future documents or on our website, unless a respondent indicates that they wish their name to be withheld.

49. This letter can also be accessed on our website (www.rail-reg.gov.uk) and in our library.

50. Please do not hesitate to contact me if you would like to discuss any of the issues raised in the paper.

Paul McMahon