



Consultation Response

Network Rail Consultation on the Capacity Charge

September 2012

Pedro Abrantes
Economist

pteg Support Unit
Wellington House
40-50 Wellington Street
Leeds – LS1 2DE
0113 251 7445
info@pteg.net

1. Introduction

- 1.1. **pteg** represents the six Passenger Transport Executives (PTEs) in England which between them serve more than eleven million people in Tyne and Wear ('Nexus'), West Yorkshire ('Metro'), South Yorkshire, Greater Manchester, Merseyside ('Merseytravel') and the West Midlands ('Centro'). The West of England Partnership, Leicester City Council, Nottingham City Council, Transport for London (TfL) and Strathclyde Partnership for Transport (SPT) are associate members of **pteg**, though this response does not represent their views. The PTEs plan, procure, provide and promote public transport in some of Britain's largest city regions, with the aim of providing integrated public transport networks accessible to all.
- 1.2. **pteg** welcomes the chance to input into the review of track access charges and to respond to this consultation.

2. Context

- 2.1. PTEs are seeking a greater devolved role in the delivery of local rail services in the West Midlands and North of England, and discussions are currently underway between the PTEs and the Department for Transport on this issue. The McNulty review identified potential benefits relating to devolved funding, specification and management of local rail services and **pteg** will be looking for any review of the track access charging regime to facilitate this wherever possible.
- 2.2. Devolution would probably mean a much more substantial role for PTEs in the specification, development and funding of passenger franchises. The PTEs are also considering what the most appropriate risk allocation is likely to be and whether to propose to take more direct control over station management and operations. In a devolved scenario, we would indirectly become Network Rail's main client in our areas, both through subsidy payments to TOCs (part of which goes towards track access charges) and in the case of capital investment. As such we have an extremely keen interest in ensuring that the track access charges regime is fair, consistent with wider policy objectives and encourages social welfare maximising behaviour by all stakeholders involved.
- 2.3. In general, we do not feel that the existing charging methodology, and the capacity charge in particular, always accurately reflect the costs directly incurred by different types of operator and service. In that sense, we feel they can provide weak, and in some cases perverse, incentives to TOCs, Network Rail and public sector sponsors. This is of particular concern in a devolved context, where the DfT would no longer be able to fully internalise existing weaknesses in the charging regime.
- 2.4. At the same time, a substantial amount of industry effort goes towards understanding, calculating and negotiating a whole range of different charges, the robustness and incentive value of which we would dispute – the capacity charge and related schedule 8 payments being a case in point. Although we recognise that there is value in some of Network Rail's proposals for reviewing the capacity charge we feel that they don't go far enough, in particular when it comes to disaggregation by time period, day of the week, route section as well as the ability to cope with timetable changes which lead to improved performance. If the effort required from the industry to administer these charges is to be justified then a commensurate amount of effort needs to go into estimating the charge so that it sets appropriate incentives.

3. Calculation, purpose and incentive properties of the Capacity Charge

- 3.1. The Capacity Charge (CC) is a payment made by train operators to Network Rail as part of a track access contract. Below we set out our understanding of the process currently followed by Network Rail to calculate this charge:
- A distinct unit capacity charge per train-km applies to each train service group, further differentiated between weekday and weekend services. The weekend unit charge is currently assumed to be a fixed proportion of the weekday unit charge.
 - As we understand it, the relative value of the unit capacity charge that should apply at each point of the network is estimated by Network Rail through a statistical analysis of the relationship between increased capacity utilisation and increased reactionary delay, based on historical data.
 - The **relative** value of the unit capacity charge that should apply to a given train service group is then calculated by taking an average of the relative unit capacity charge across the network operated by a given train service group, weighted by train-kms run on each section of the network. We assume that this is based on weekday train-kms only.
 - The **absolute** value of the unit capacity charge that should apply to a given train service group is calculated so as to ensure that the total amount of revenue received by Network Rail from Capacity Charges equals the amount paid out by Network Rail to train operators in Schedule 8 payments. The idea behind this is that Network Rail then uses the proceeds of the Capacity Charge to compensate train operators for the delays deemed to be its responsibility.
- 3.2. As set out in the consultation document, the primary objective of the Capacity Charge is to recover Schedule 8 costs. Although it would appear that the Capacity Charge performs this function effectively, we are not clear whether and by what process Network Rail is able to anticipate Schedule 8 costs and whether any ex-post analysis has been undertaken to determine how well Capacity Charge payments and Schedule 8 payments map onto each other across the network. We are keen to understand the extent to which Capacity Charges actually compensate for Schedule 8 payments at an individual TOC and service group level. We would also be interested to see how the introduction of new services (which would presumably lead to an increase in Capacity Charges) impacted on Schedule 8 payments on relevant parts of the network.
- 3.3. In addition, the Capacity Charge is claimed to provide incentives to Network Rail towards a more efficient allocation of capacity, as well as price signals to operators and funders, which should encourage the most economically efficient use of capacity. On the first point, we cannot see how the Capacity Charge provides any form of incentive to Network Rail given that an increase in Schedule 8 payments will eventually result in an equivalent increase in the quantum of Capacity Charges. From this perspective, Network Rail is financially immune to changes in congestion.
- 3.4. With respect to the second point, we would agree that the Capacity Charge provides signals to funders regarding the impact of traffic changes on congestion. Whether the same is true of operators is debatable as TOCs are currently shielded from in-franchise changes in access charges and will most often respond to essentially fixed franchise specifications.

- 3.5. More fundamentally, the extent to which these signals are the correct ones will depend, amongst other things, on the quality of the underlying data, the degree of disaggregation of the charge and the impact on congestion of intervening enhancements and operational changes. Bearing those criteria in mind, we have little confidence that the Charge provides appropriate incentives in its current form. Equally we have serious doubts that the marginal changes proposed in the consultation document will do much to address this issue.
- 3.6. In the rest of this document, we make some proposals as to how the Capacity Charge could be improved to provide more meaningful price signals. Unless these proposals can be taken on board, we feel that there are much less onerous funding mechanisms which could perform the function set out in paragraph 3.2 just as effectively.

4. Disaggregation issues

Time period

- 4.1. We believe that the high level of aggregation of the Capacity Charge and the arbitrary nature of the weekend discount actively distort service planning decisions by penalising services on less congested parts of the network and at less congested times of the day and the week. We refer you to the examples quoted in the Centro response for an illustration of this point. In our view, it is inconceivable that NR's Schedule 8 cost exposure is the same across the day and on all parts of the network operated by a given train service group. It therefore seems clearly inefficient to levy uniform capacity charges across the day.
- 4.2. Regrettably, we note that NR does not support the concept of disaggregating the Capacity Charge by time period. From our perspective, there is little incentive value in the capacity charge without further time disaggregation. Most decisions available to TOCs and funders relate to timetabling rather than routing and hence it seems pointless to have a capacity charge that concentrates on routing alone. This would also have the benefit of encouraging freight services, which are less time sensitive, to use the network at less congested times of the day.

Weekend discount

- 4.3. With respect to the weekend discount, we feel that this is too coarse an approach and have also seen no justification for the level of discount offered at present. We should also point out that the weekend timetable can vary significantly between Saturdays and Sundays thereby highlighting the arbitrary nature of a uniform discount. There may well be many examples across the country where the Sunday charge should be zero rather a proportion of the weekday value.
- 4.4. We note that Network Rail does not favour a separate discount for Sundays as it does not wish to hinder possessions planning (as per footnote on page 13). This would appear to suggest that Network Rail wants it both ways – to discourage traffic when the network is busy, but also to discourage traffic when the network is quiet and could be inconvenient. Network Rail should be clearer about the economic signals it is trying to send.

Train service code

- 4.5. The consultation proposes that charges are applied by train service code rather than by train service group. In practice this will make little difference for most flows as the Capacity Charge will continue to be driven by the congested core parts of the network, to which most

train services are likely to converge. We believe it would be of greater benefit to derive a unit Capacity Charge by route section. This would provide more appropriate incentives, for example, for extending services towards less congested parts of the network. At the same time, a uniform charge per service provides no incentive for longer distance services to avoid particularly congested bottlenecks. We refer you to the examples in Centro's response for an illustration of these points.

Consultation Question 1

Do you agree that, beyond the arrangements currently in place, capacity charge tariffs that vary across time should not be introduced?

PTEG does not agree. If the Capacity Charge is to be maintained then further disaggregation by time period is essential in order to introduce the most appropriate set of incentives.

Consultation Question 2

Do you agree that the weekend discount should remain in place? Do you agree that the magnitude of the discount should be revisited, and informed by analysis undertaken as part of the capacity charge recalibration exercise.

While PTEG supports the intention to review the empirical basis on which the weekend charges are calculated we strongly disagree with the principle of a uniform weekend discount.

Consultation Question 3

Do you agree that the capacity charge should be disaggregated to train service code (rather than train service group) level in CP5.

PTEG believes that, while more disaggregation is desirable, this should include route section rather than just service code.

5. Applying new rates in CP5

- 5.1. Some kind of tool will be essential to ensure the Capacity Charge is applied fairly to new or amended services. This should also include the ability for Capacity Charge rates to be reviewed in the light of major supply-side changes during the course of CP5 (e.g. infrastructure enhancements which create additional capacity). There should also be flexibility to allow bespoke agreements where appropriate.
- 5.2. The need for this tool also relates to the more fundamental point that increases in traffic do not always lead to an increase in congestion and delay. For example, this could be the case where more train-kms need to be operated to accommodate a more flexible timetable with greater layover time, or where trains need to run an additional distance to avoid blocking a platform at a central station for long periods of time. A tool could be used to derive more appropriate bespoke capacity charges in such circumstances. We also refer you to our comments in sections 8 and 9.

Consultation Question 4

What are your views on developing a tool to calculate capacity charge tariffs for new or amended service codes?

PTEG would support the development of such a tool. However it needs to be able to reflect detailed operational constraints. Careful consideration is needed to understand the implications, for example, of additional services on a route increasing the capacity utilisation and therefore technically requiring the recalibration of rates for all services on the route.

6. Disaggregation for Freight

- 6.1. If the capacity charge is to incentivise efficient use of the network, then a flat rate national charge for freight services is clearly nonsensical. If this were to be the case then we would be better off doing away with the Capacity Charge altogether.

Consultation Question 5

Do you agree that all freight operators should pay the same single capacity charge tariff in CP5? What are your views on the level of discount applied to freight services?

PTEG does not agree that a single capacity charge tariff is appropriate for freight services as it does not send any signals about efficient use of capacity.

7. De minimis threshold

- 7.1. PTEG accepts the logic of a *de minimis* threshold, especially on routes where there is only a single operator.

Consultation Question 6

Do you agree with Network Rail's proposals in relation to the de minimis threshold?

PTEG agrees with the concept of a *de minimis* threshold.

8. Arrangements for large timetable changes

- 8.1. It is essential that where there is change in infrastructure capability, an improvement in operational efficiency or a significant timetable change then there is an opportunity for reviewing the Capacity Charge. At present the capacity charge arrangements act as a disincentive for local funders to invest in the rail network as there is no mechanism for recouping the reduced delays (and hence Schedule 8 payments) that result. To make matters worse, the capacity charge means that funders often have to provide additional operating subsidy to cover the cost of the Capacity Charge.
- 8.2. We also refer you to our comments in sections 5 and 9 regarding the need for a tool to calculate capacity charges for amended services.

Consultation Question 7

What are your views in relation to arrangements for handling large timetable changes in CP5?

PTEG considers that it is essential to have a mechanism in place for handling significant changes to timetables and network capability. This needs to cover not just major investment programmes, but also more modest changes that may have a localised performance impact.

9. Methodology

- 9.1. The proposed methodology for calculating the Capacity Charge is based on the assumption that reactionary delay is an increasing function of capacity utilisation. While this is likely to be the case in aggregate terms, there will be specific exceptions where a greater number of services can be used to introduce slack into the timetable or lead to other types of operational efficiencies, which could reduce reactionary delay. We would suggest that the estimation methodology employed takes this into account.
- 9.2. In addition, we note that while the estimation of the relative unit capacity charge is done at the level of individual route sections, Network Rail is proposing to aggregate this back up to train service code level. As argued in section 4 we would suggest retaining a route section disaggregation in the application of the charge.
- 9.3. In terms of the measure of capacity utilisation, the CUI is probably the best indicator currently available. However it is a relatively simplistic measure that cannot capture all the complexities of operating on a congested network. Ideally each route section should be the subject of proper timetable modelling to understand the impact of changes in traffic. PTEG would support the development of a simplified national performance model better able to predict the performance impact of service changes and capable of modelling individual service changes so as to give bespoke capacity charges. Although this would need to be simpler than Railsys and other existing models, it would still be an improvement on the current approach. We also refer you to our comments in sections 5 and 8 regarding the need for a tool to calculate capacity charges for amended services.
- 9.4. In the event that the recalibration exercise fails to identify sensible statistical relationships with the required degree of confidence we would not support the continuation of the Capacity Charge in its current form and would suggest a more pragmatic approach to meet Network Rail's funding requirements.

Consultation Question 8

Do you consider that the proposed methodology for recalibrating the capacity charge is appropriate?

We would recommend that the calibration methodology takes into account the possibility that operational efficiencies can be introduced as the result of increases in timetabled train-kms.

Consultation Question 9

Do you agree that the CUI should be used as the basis for capacity charge recalibration as part of PR13?

Given the lack of alternatives, we are willing to accept the continued use of CUI in CP5. However, we would call on NR to develop a simplified national performance model which could be used to assess the performance impacts of detailed operational timetable changes.

Consultation Question 10

What are your views about accounting for other determinant of reactionary delay as part of the CP5 recalibration of capacity charge?

PTEG would support any further work to better understand the relationship between capacity and reactionary delay. As previously mentioned the current approach fails to recognise many factors that could influence performance (see our response to question 8).

Consultation Question 11

What are your views about the functional form used to model the relationship between reactionary delay and capacity utilisation?

Please see our response to question 8.

Consultation Question 12

How do you think that the industry can guard against analytical risk in the capacity charge? In the unlikely event that the proposed statistical recalibration approach is not fully successful, how should we proceed to secure a capacity charge which is fit for purpose in CP5?

The proposed capacity charge working group would need to address this issue, noting the comments above.

10. Changes in the Capacity Charge in CP5

- 10.1. The capacity charge is already a significant cost to the rail industry and it appears likely that capacity charge rates could increase substantially in CP5. This makes it even more important that the fundamental problems we have identified be addressed.

Consultation Question 13

How should changes in the capacity charge between CP4 and CP5 be managed?

If the distortions in the existing capacity charge structure persist then a simpler mechanism to meet Network Rail's funding requirements should be given some consideration.

11. Industry Engagement

11.1. The issue of the capacity charge is a key concern to the PTEs, and therefore we would welcome close engagement in the process for determining the charge going forward. We consider the setting up of an industry working group as a positive step and we would wish to be represented on this group.

Consultation Question 14

Do you support the creation of a capacity charge working group? How do you consider that its membership should be decided? What should be its remit?

PTEG supports the creation of a capacity charge working group which must include key funders such as PTEs.