

## **Consultation on the Capacity Charge**

### **Centro Response**

#### **Background**

1. Centro welcomes the opportunity to comment on the consultation on capacity charge. Centro has expressed its concerns consistently over the Capacity Charge which is a key driver of costs for rail services in the West Midlands and indeed the current application of the capacity charge has directly resulted in service enhancements funded by Centro becoming unaffordable and being withdrawn.
2. Centro is looking to develop a stronger role in the specification and funding for local rail services going forward, and is currently in discussion with the DfT over devolving rail responsibilities to the organisation. We have submitted an Expression of Interest in relation to a new West Midlands Rail Franchise. As part of the development process for a new WM local rail franchise we will be considering opportunities for driving efficiencies in costs, and as capacity charge represents a considerable cost to the industry it is important that we challenge the assumptions being made.
3. We consider that the fact that Network Rail earns more from Capacity Charge than it does from Variable Track Access as being indicative that there is a need to challenge why an effectively artificial charge related to Schedule 8 regime costs generates more income than the physical wear and tear on the network represented by VTAC.

#### **Purpose of the Charge**

4. The primary objective of the Capacity Charge is to recover additional Schedule 8 costs, with a secondary objective to send price signals about the allocation of capacity. Centro believes that the charge does neither of these things effectively, and just acts as an arbitrary additional cost on the provision of rail services which makes justifying investment in rail harder for authorities such as Centro.
5. Centro accepts that there is often a direct link between a more congested network and the amount of reactionary delay, however this is by no means always a straightforward relationship. Examples where running more trains does not necessarily result in additional delay include:
  - Where additional resources which extend turnrounds are provided and result in less knock-on delay to return workings – e.g. a 15 minute delay to an hourly service with 5 minute turnrounds could result in more overall delay than a 15 minute delay on a half-hourly service with 20 minute turnrounds
  - Where a service is extended and provides a more operationally robust scenario – e.g. In the West Midlands the extension of Birmingham -

Walsall services to Rugeley avoided a unit blocking a platform at Walsall for 30 minutes and allowed more robust turnaround times to be provided, giving a net performance improvement. This improved performance was lost when the capacity charge resulted in the extended services being unaffordable.

- Where there are infrastructure improvements which enhance network capacity – e.g. where a resignalling scheme reduces headways or other projects such as the new bay platform at Coventry reduce interaction between services.
  - Where a timetable restructuring, while increasing the number of services, reduces the variability in stopping pattern between services.
6. There are other examples across the country where additional services have been introduced without significant performance impact – a good example being the London Overground frequency enhancements as the associated investments have managed to ensure that an enhanced service frequency is delivered at high reliability levels on an extremely congested network.
  7. These examples illustrate that there is not a straightforward relationship between traffic volume and reactionary delay and it is an oversimplification to assume that just by running more train miles that performance will decline. In general, when planning new services, TOCs will take steps to introduce robust operational arrangements to ensure that, as far as possible, performance levels are maintained.

### **Structure of the Charge: Issues and Options**

8. The charge is designed to allow NR to recover its Schedule 8 costs and applies to all services. The consultation document argues that there would be difficulties in applying the charge only to incremental services. Centro believes that, given the huge amount of cost that the charge and Schedule 8 imposes on the industry, that an option which effectively rebalances Schedule 8 to be more cost neutral at the start of a control period needs to be investigated, allowing the capacity charge to therefore apply to changes to this base position only.
9. Centro recognises that Network Rail would need to remain financially neutral were there to be a change in approach to the capacity charge, and that an increase in the fixed charge could be an outcome were the capacity charge not applied across all services. However, Centro believes that such are the shortcomings in the operation of the capacity charge in practice that it would be preferable for NR to receive funding for Schedule 8 costs for base level services through another mechanism.
10. Centro is also unclear as to whether the Capacity Charge allows NR to recover the Schedule 8 costs just related to TOC caused delay, or all causes. On shared routes it is reasonable that NR shouldn't be penalised for when one operator delays others, however when NR causes delay it is

less reasonable that NR should be able to offset its liabilities through the capacity charge. On routes with only a single operator it is arguable that capacity charge should not apply at all given that all capacity charge would be doing is requiring the TOC to pay NR money which is then returned to the TOC through Schedule 8 compensation. It is surely better that industry costs are reduced by removing pointless money-go-rounds such as this.

11. Centro would like to understand the extent to which capacity charge compensates for Schedule 8 payments in practice at an individual TOC and service group level. Presumably for some service groups there is over-compensation, while for others it under-compensates. Centro would like to understand the degree in which it compensates in aggregate across the network, but also on some specific case studies where new services have been introduced across the network. Centro would like to understand what work has been undertaken to assess this and would suggest that some specific analysis for case studies is taken forward and shared with the industry.

### **Disaggregation Issues**

12. The way that the capacity charge is currently structured with a lack of disaggregation distorts decisions by TOCs and funders, and in Centro's view has unfairly penalised our attempts to improve services on the margins of the network and on the margins of the day.
13. For example, Centro has pursued a policy of improving evening services and is currently planning to fund an improved evening service between Birmingham and Stratford-upon-Avon where the current last departure is as early as 2030. When Centro funds the extension of evening services between Whitlocks End and Stratford at an hourly frequency, on a resignalled line with 5 minute headways and no other traffic, between 2130 and 2330, the capacity charge that is levied per train mile is exactly the same as if we were trying to fund an additional service into Snow Hill from Stratford at the height of the morning peak.
14. In Centro's view it is inconceivable that NR's Schedule 8 cost exposure is the same across the day and it is wrong (not to mention economically inefficient) that Centro should be penalised for trying to fund services at quiet times of the day where there is currently inadequate service provision.
15. We note that NR does not support the concept of disaggregating capacity charge by time. However, we see 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. Centro believes that as a minimum a night time banding (e.g. 2100-0600) where there is significantly less traffic using the network ought to be considered. This would also have the benefit of encouraging freight services which are less time sensitive to use the network at night.

However Centro believes there is strong case for further banding if the correct economic signals are to be sent.

**Consultation Question 1**

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

**No, Centro does not agree. Centro believes that as a minimum a night-time tariff should be introduced which reflects the considerably lower use of the network during the evening and overnight. Further disaggregation across timebands should also be considered.**

16. As a general principle, it seems obvious to us that if the charge is to drive efficient behaviour then it needs to vary in proportion with traffic levels (and, ideally, as we argue earlier, with detailed operational constraints). It is Centro's view that the weekend discount is too coarse an approach to reflect the operating realities at weekend. On many lines the Saturday service levels are no different to weekdays, and it is therefore wrong for capacity charge to be any different to the weekday level given that a delayed train is likely to have exactly the same impact. It is more likely that on Sundays services will be lower than on weekdays, and the capacity charge should be lower. However, the current uniform discount seems to lack any substantial empirical or theoretical rationale. There may well be many examples across the country where the Sunday charge should be zero rather 75% of the weekday value.

17. Centro notes that Network Rail does not favour a separate discount for Sundays as it does not wish to incentive higher traffic levels on this day as it could frustrate possession planning (as per footnote on page 13). This would appear to suggest that Network Rail wants it both ways – to discourage traffic when it's busy, but also to discourage traffic when it is quieter and could be inconvenient. Network Rail needs to be clear what economic signals it is trying to send with the capacity charge.

**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.*

**Centro believes that a broad, network-wide weekend discount is not appropriate, but that the capacity charge that applies at a given time of day should reflect traffic levels during that period. Where appropriate, this should be separately applied to Saturdays and Sundays. In any case, Centro believes the case for an overnight charge is stronger than for a Saturday discount.**

18. The consultation proposes that charges are applied by train service code rather than train service group. In practice this will make little difference for most flows as capacity charge will continue to be driven by the core parts of the network, which are likely to be used by most services in the

service group (e.g. Birmingham-Walsall and Birmingham-Rugeley services have different train service codes but both use the congested section of railway between New Street and Aston). It would be of greater benefit to apply capacity charge by route section, which should technically be feasible (in much the same way as track access billing). This would enable logical choices to be made about extending services on less congested parts of the railway, without incurring a level of capacity charge disproportionate to the level of performance risk.

19. A good example of how this would change Centro's service planning decisions would be the daytime off-peak Chase Line (Birmingham-Rugeley). In 2008, Centro introduced a service enhancement formed by extending existing Birmingham-Walsall services. This change actually optimised use of capacity by removing the need for a train to stand in the platform at Walsall for over 30 minutes, which formed a capacity constraint for the operation of other services. Although more train miles were being run, the new roughly 30 minute interval timetable was more performance robust than the previous hourly timetable, with benefits for all network users. However the extensions were subject to the same level of capacity charge for the lightly used Walsall-Rugeley line as for the busy Birmingham-Walsall line. This meant the service extensions were liable for a level of capacity charge disproportionate to the increase in congestion. In fact, the capacity charge should arguably have been reduced, as the new timetable actually optimised use of capacity and increased network resilience to incidents of delay.
20. What ultimately happened in this instance is that the service extensions were withdrawn after 2 years of operation on grounds of affordability. Had the capacity charge been a more accurate reflection of underlying congestion costs this service extension may still be in operation, with benefits both for network performance and passengers.
21. Another consequence of applying the charge by service code rather than route section is that operators have little incentive to avoid particularly congested bottlenecks. For example, on a route such as between Wolverhampton and Birmingham New Street there are multiple operators and service groups, each with a different level of charge. A Wolverhampton to Birmingham local service which only operates over this congested section of route is likely to have a higher capacity charge per train mile than an Aberystwyth to Birmingham International service which operates mostly on uncongested sections of the network. This means that there is little incentive on the operator of the Aberystwyth train to consider terminating at Wolverhampton and not using the congested network into Birmingham. If capacity charge is to have any role to play in sending signals about effective use of capacity then the capacity charge should be separately estimated and applied by individual route section rather than by service group/code.

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**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.*

**Centro believes that, while more disaggregation is preferable, this should be by section of route rather than by service code or group.**

**Applying New Rates in CP5**

22. Some kind of tool will be essential to ensure Capacity Charge is applied fairly. This should also include the ability for Capacity Charge rates to be reviewed in the light of major changes (e.g. infrastructure enhancements which create additional capacity) during the course of CP5. There should also be flexibility to allow bespoke agreements where appropriate.

**Consultation Question 4**

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

**Centro would support the development of a tool, however it needs to be reactive to circumstances and flexible. 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.**

**Disaggregation for Freight**

23. Freight services often have a lot more flexibility in the routing and timing of their services than passenger services, and if an objective of the capacity charge is to incentivise efficient use of the network, then the capacity charge should encourage freight operators to make best use of spare capacity. A flat rate national charge would clearly not achieve this objective, and as mentioned earlier a night-time reduction in charge could well influence freight service planning.

**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?*

**Centro 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.**

**De Minimis Threshold**

24. Centro accepts the logic of a *de minimis* threshold, especially on routes where there is only a single operator. Centro believes that the concept of a *de minimis* impact on performance needs to be rolled out further so that when there is a demonstrably minimal impact on performance of a new

service (such as the operation of a new evening service on an otherwise empty route) that a pragmatic approach can be taken to waive capacity charge.

**Consultation Question 6**

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

**Centro agrees with the concept of a *de minimis* threshold, however its application needs to be widened to cover all service proposals that demonstrably have little impact on overall network performance.**

**Arrangements for large timetable changes**

25. It is essential that where there is change in infrastructure capability or significant timetable changes that there is the opportunity for reviewing the capacity charge. Even relatively small scale enhancements (such as Chase Line resignalling which will remove absolute block signalling and improve headways between Walsall and Rugeley from 14 minute to 5 minutes) can have a dramatic impact on capacity utilisation. Where projects such as the construction of the new bay platform at Coventry station create additional capacity and operational flexibility, it is essential that these benefits are captured and recognised in capacity charge calculations.

26. At present the capacity charge arrangements act as a disincentive on third parties to invest in the rail network as there is no financial mechanism for investors to receive the performance benefits from funding improvements. Yet, the capacity charge means that funders often have to provide additional operating subsidy where their investment has actually reduced the performance risk for Network Rail.

**Consultation Question 7**

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

**Centro 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 more modest changes that have a more localised performance impact.**

**Methodology**

27. The proposed methodology for calculating the capacity charge is based on the assumption that reactionary delay is an increasing function of capacity utilisation. As mentioned previously, while this is often the case, there are exceptions where a greater number of services can be used to introduce slack into the timetable or other types of operational efficiencies, which reduce reactionary delay. By excluding this possibility, the capacity charge rates will always assume that a more intensive service should be charged

more, and therefore this reduces the incentive on operators and Network Rail to proactively look at ways of planning services more reliably.

28. The methodology looks at splitting the network into individual route sections, and estimating a mathematical relationship between observed delay and congestion on each route section and a measure of capacity utilisation. This mathematical function can then be used to estimate the incremental impact of changing service levels on an individual route section or for an individual service. This would then be aggregated across the network and converted this into a cost per train mile based on Schedule 8 rates. The calculation appears to include a factor which only means that delays caused by Network Rail are included in the calculation. Centro would be concerned that the Capacity Charge appears allow Network Rail to defray its own risks associated with Schedule 8 costs and could reduce the incentive on NR to improve its own performance and manage delay effectively.

29. As mentioned above, Centro supports the concept of any charge being by route section, rather than by service code/group, as this significantly dilutes any incentive effect the charge could have on using capacity efficiently.

**Consultation Question 8**

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

**Centro has concerns with the recalibration methodology as outlined above.**

30. The CUI offers one approach to defining network utilisation which is probably the best measure available currently. 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, and Centro would welcome consideration being given to whether a simplified national performance model can be developed which can better predict the performance impact of service changes. This would need to be considerably simpler than the existing Railsys and other models, but give a better output than the broadbrush approach underpinning the capacity charge calculations. Such a model would also allow individual service changes to be modelled to give bespoke capacity charges.

**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, Centro is 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?*

**Centro would support any further work to better understand the relationship between capacity and reactionary delay. As previously mentioned the current simplistic approach fails to recognise many wider factors influencing performance.**

**Consultation Question 11**

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

**Centro has no view, at this point, on the appropriate functional form, in particular as no empirical evidence has been provided by NR from which we could form a view. However, we would be keen to be involved from an early stage on any analytical work carried out by NR and its consultants. We would also argue that whatever the functional form, it should effectively consider not just the effect of adding a marginal extra train, but also the impact of reducing service levels or making other changes.**

31. Centro notes the options available in the event that the recalibration exercise fails to identify the required statistical relationships with the required degree of confidence. For the reasons outlined above, Centro is concerned that there are fundamental flaws in the whole rationale and operation of the capacity charge, and we would be extremely disappointed if a fundamental improvement in approach and application cannot be achieved in CP5. We would therefore not support any continuation of the CP4 approach which we consider unfit for purpose and would look for a more pragmatic approach to be developed which met our concerns. This could be as radical as scrapping the charge altogether and seeking other ways of providing Network Rail with insurance against Schedule 8 cost increases.

**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?*

**Centro believes that the proposed capacity charge working group would need to address this issue, noting the comments above.**

**Changes in the Capacity Charge in CP5**

32. 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 some of the fundamental problems with the charge are addressed as Centro is extremely concerned

that it will not be able to afford to fund future train service enhancements which despite being economically beneficial have their cost structure distorted by spurious capacity charges. In CP4 we have already been forced to withdraw funding for services between Walsall and Rugeley where the capacity charge represented approximately 20% of the entire cost of the service but we feel the services had no material impact on congestion.

33. A significant rise in costs from London Midland in April 2014 for the service enhancements which we're currently supporting is likely to lead to service withdrawals. This would be all the more unfortunate given these services are generally at off-peak times on uncongested routes. Another consequence could be that the enhanced Saturday Cross-City North service which London Midland is operating commercially at present becomes loss-making forcing them either to seek financial support from Centro, or withdrawing the service which would result in a less reliable service through New Street as a result of Cross-City South services having to turn back and block platforms, thereby increasing congestion in practice.

**Consultation Question 13**

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

**Centro believes that there could be some major affordability issues to be resolved locally if the distortions in the existing capacity charge structure persist and if there is a significant increase in capacity charge in CP5. It is essential these impacts are understood before decisions on the future of the capacity charge are reached.**

**Industry Engagement**

34. The issue of the capacity charge is a key concern to Centro, and therefore we would welcome close engagement in the process for determining the charge going forward. Given our previous concerns on the issue of the charge, we're disappointed that we have not been more involved in earlier discussions over the charge. However 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?*

**Centro supports the creation of a capacity charge working group which must include key funders such as Centro and other PTEs**

## Summary

35. Centro has fundamental concerns about the capacity charge and believes that it is not currently fit for purpose, does not meet its objectives and actively distorts the economic signals being given to the market. In particular:

- The charge gives long distance services no incentive to avoid congested parts of the network given that the capacity charge is diluted across their entire route. This effectively discriminates against urban rail services operating in congested areas by making them more expensive per mile to operate than longer-distance services operating on the same tracks.
- The charge applies equally across the day and does not incentivise the provision of services in the evening/night and at other off-peak times when capacity is freely available
- The charge is not sufficiently granular to recognise the difference between extending an existing service onto an uncongested piece of track (e.g. Walsall to Rugeley or Whitlocks End to Stratford) and operating a service in central Birmingham at the height of the peak.
- The charge fails to recognise that the relationship between capacity utilisation and delay is not always straightforward and that operating more train miles does not necessarily create more performance risk. By failing to recognise this, the charge could fail to incentivise operators to mitigate the performance risks associated with running more services.
- The charge does not easily recognise the impact of infrastructure improvements and does not incentivise third parties to invest to improve the capability of the network
- As far as we're aware, no analysis is provided by NR to show whether the capacity charge does compensate Network Rail accurately for its Schedule 8 risk on a route by route basis. We also wonder whether the capacity charges acts to reduce the incentives on Network Rail to manage its performance effectively.
- In many instances the charge just acts as part of a money-go-round whereby TOCs pay Network Rail capacity charge to allow Network Rail to pay it back to them in Schedule 8 costs. Given the sums involved, there could be a major opportunity to reduce industry costs if this could be reformed.

36. In the light of these concerns Centro's view is that fundamental reform of the capacity charge is required, and believes that a new approach is required which either develops the charge to such a level of detail that many of these perverse incentives can be mitigated, or it moves away from the charge entirely and creates a framework to calculate the

performance impacts of incremental services more accurately, from which a negotiated charge is based. On this basis Network Rail could be compensated through the fixed charge for any Schedule 8 implications that fall on it at the start of the control period.

37. Centro would welcome further dialogue with Network Rail and the ORR on the issue of capacity charge and would like to be represented in any future industry working groups looking at the issue.