

Ekta Sareen
Senior Regulatory Economist
Network Rail
Kings Place
90 York Way
London
N1 9AG

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Dear Ekta,

Periodic Review 2013: Network Rail consultation on traction electricity and electrification asset usage charges in CP5

Thank you for the opportunity to respond to the consultation on traction electricity and electrification asset usage charges in CP5. This letter constitutes the Go-Ahead Group's response and also represents the views of London Midland, Southeastern and Southern Train Operating Companies.

I confirm no part of this response is confidential and can be published on your web site.

We note that this consultation is being undertaken by Network Rail and is focused on possible approaches in CP5 for modelled EC4T consumption rates, regenerative braking, electrical losses (AC), electricity prices, the contractual framework and electrification asset usage charges. This is set in the context of the overall ORR proposals for traction electricity charges in CP5. This consultation provides proposals in relation to the third ORR proposal, namely uplifted consumption rates to incentivise operators to move to meters. It does not address the first two ORR proposals in relation to incentives to reduce electrical system losses and end of year volume wash up for non metered operators.

Given the limited scope of the consultation, our response is framed by the following considerations.

- The ORR will be undertaking their own consultation on traction electricity proposals for CP5 in the near future, therefore this response must be conditional on issues raised in this subsequent consultation;
- The final CP5 determinations is still to be made, the impact of the proposed incentives on both Network Rail and operators may change dependent on the final determination;
- A number of important issues are not addressed in this consultation, for example DC network losses, dependent on the treatment of such losses and incentives to reduce them on both Network Rail and operators could significantly alter the impact of proposed incentive regimes.

Given the criticality of the interrelationship with the future ORR consultation on traction electricity and the wider CP5 review, we have also provided a copy of this response to the Office of Rail Regulation.

Our franchises are major users of traction electricity on the rail network. We therefore recognise the importance of the issues raised and their impact both on our franchises and the industry as a whole.

Our franchises are represented on the industry traction energy electricity steering group (TESG) where a number of the issues raised below have also been discussed.

Though all our franchises are users of traction electricity, the different characteristics of the franchises results in potentially different outcomes from the incentives proposed. London Midland is a user of AC traction electricity and operates on a multi user network. Southern and Southeastern are the significantly majority operator in their geographical areas and are primarily users of DC traction electricity. These differences: AC or DC, multi user or majority user, have the consequence of providing different outcomes and incentives in relation to e.g. use of meters, treatment of network losses and the role of the wash up. These differences are reflected in our responses to the specific questions raised.

Recognising the points above, it is important that the ORR set out clearly the strategic outcomes it wishes to be delivered. In our opinion, priorities should include targets for network transmission losses and improved knowledge of asset condition and performance. These strategic outcomes should set the right incentive framework, e.g. the value of meters to accurately record traction usage. The current proposals do not give this strategic outcome framework.

With a view to reducing industry costs and taking into account data that is now available, we believe also that it should be possible for operators to move to quasi-metering i.e. with only part of individual fleets fitted, thereby reducing the cost of full fleet fitment. Our experience and data analysis indicates that the required level of accuracy can be achieved through this approach.

We address each question in turn below, however key points to consider include:

- Consumption rates and methodology should remain the same, with possible metered consumption rates adjusted in relation to quasi-metering;
- The 10% uplift on modeled charges is not suitable, but if actioned, the 'proceeds' should be returned via the wash-up process back to operators;
- Regenerative discounts to remain however the verification of usage should be a two-way process;
- The 1% Metered AC losses uplift factor is not agreeable due to the variability of geographic, unit types etc, which are too broad to place one rate across the whole network;
- Any mark-ups or rebates should be based upon an agreed geographic/ESTA basis and no broad assumptions made across the whole network as this will be disadvantageous to some operators;
- Network Rail should be incentivised to limit losses across the network, not simply pass charges onto the business and add a percentage mark-up;
- Rates agreed for CP5 should remain fixed and not revisited after two years, emerging information should be considered and analysed for inclusion in CP6;
- Consideration of a review of the metering rules concerning the 'Transitional Risk Sharing Mechanism'(TRSM) to be reviewed. All billing is either AC or DC, the rules for TRSM currently include both AC & DC together in the calculation of <90%. Thus for example in ESTA 'T' all our over payments relating to the incorrect losses calculation was returned in wash up to all other operators who are not metered.

A) *Do you agree with our proposal to leave all modelled passenger and freight EC4T consumption rates unchanged for CP5?*

We agree with the proposal that modelled consumption rates should remain the same for CP5.

B) *Do you have any other suggestions to make about modelled consumption rates in CP5?*

We believe that there is an opportunity to adjust consumption rates where metered consumption data is available developing a quasi-metered system; this is discussed in more detail in our answer to question (U) below.

C) *Do you agree that it is appropriate to continue using the current uplift factors for electric multiple units?*

This is a proven calculation, we therefore agree with this proposal for no change.

D) *Do you agree that it is suitable to continue using the agreed methodology for calculating new modelled EC4T consumption rates, during CP5?*

We believe that all new rolling-stock delivered in CP5 will be fitted with meters; however the existing methodology should be retained in the event that any are delivered without meters.

E) *Do you have any views on our suggestion to uplift modelled consumption rates by 10%, consistent with the surcharge applied for missing metered data?*

We do not believe that an additional surcharge on modelled consumption is suitable. Wash-up calculation methodology makes this a cashflow exercise as any increase per period will ultimately be returned at the end of the year. Furthermore, the additional charge for in-fill act as a disincentive for operators considering becoming metered, in light of the evidence from operators who have moved to metering.

F) *Do you have any views on the use of the proceeds from an uplift to modelled consumption rates?*

The proceeds should be returned to operators in some form otherwise a 10% uplift would present a significant increase in costs to all operators. The billing process is designed to be as accurate as possible, to over-charge and not return access payments via the wash-up is unacceptable.

G) *Do you have any views on applying the uplift to modelled consumption rates to new vehicles only?*

We don't believe this would be worthwhile as there are very few new unit type additions. Also the TSI specifies meters as part of the specification requirement for the procurement of new trains.

H) *Do you have any views on whether regenerative braking discounts for modelled usage should remain in CP5 or CP6?*

We strongly believe that the regenerative braking discounts for modelled usage should be retained. London Midland's TAB's data shows that although regenerative levels do fluctuate it is always significant. Southern's analysis of metered trains also demonstrates that RBD is on average higher than the 15% regulated RBD. Increased use of network capacity requires that there is an incentive for operators to use regenerative braking and reduce the level of consumption and associated total cost to the industry, not to mention the environmental impact.

I) *Do you have any views regarding provisions to allow us to verify that regenerative braking is being used correctly?*

We believe that this is a reasonable position to take; however the consequences of any audit should apply in both directions. i.e. if it is shown that the discount is too small it should increase, also there must be incentives to ensure Network Rail's infrastructure is receptive for regeneration on the AC and DC networks at all times in all locations. The definition of "correctly used" needs clarification and not used as an excuse to restrict the operation of regenerative braking.

J) *Do you agree with our proposal to apply a regenerative braking losses factor of 0.9899 (based on losses estimate of 1%) to metered AC regenerated energy?*

We strongly disagree with this proposal. Although we do accept it is likely at there is an element of Transmission loss; on routes with a high frequency of services the losses would be minimal as the electricity regenerated will be taken up by other trains in that section. Any losses would also be highly variable depending on the geography, unit types etc, so an average loss factor would not be appropriate. If there was quantification of this theory it would have to be implemented individually in each ESTA taking into account traffic patterns and energy being returned to the National Grid, in a similar way to normal line loss.

K) *Do you have any views on reopening the regenerative braking losses factor for AC after two years during CP5 to reflect emerging information, capped at no less than 0.9744 (losses estimate of 2.5%)?*

We do not support this proposal as discussed. However, if a regenerative loss factor was adopted it should be fixed for the control period, apply specific charges to an ESTA and at a level which incentivises Network Rail to reduce the losses (i.e. on the lower side). We suggest that during CP5 emerging information should be gathered and analysed for possible implementation in CP6.

L) *Do you have any views on the other options for charging for metered regenerated energy?*

As with the total line loss factor, it is reasonable that any regenerative loss factor would need to be calculated on a basis more relevant to each particular operators route geography, timetable and unit characteristics.

We would however be very concerned if a similar approach were to be adopted on the DC network for two reasons. Firstly, System Losses - As part of the work of TESS Southern jointly with Network Rail conducted extensive trials of the impact of regenerative braking on the DC network on the Dorking Horsham route using 4 & 12 car formations. The route had been electrically isolated from the rest of the network, which enabled us to understand the effect of being able to use regenerative braking when there was no load on the network. It was found that trains were able to apply full regenerative braking even with no load on the network and the network was fully receptive to it. The study concluded that the regenerated power was used to feed the very high system losses which are inherent in the DC network, these system losses are greater than the amount of regenerated power. Therefore the argument that DC regeneration is inefficient does not hold and on the DC network regenerated power will cover transmission losses reducing the associated costs.

Secondly, Source to Sink Distances - Transmission system losses are in large part caused by the distance between the power source and the power sink (trains). In a non regenerating network there are few sources (sub-stations) which are in fixed positions and many sinks. In a regenerating network there are many sources and the average source to sink power transmission distance reduces

dramatically, this further reduces transmission system losses. Given these two effects reduce these losses it would be absurd to apply any reduction for transmission losses to regenerated power as it is used either to reduce system loss, or where there is a power demand, reduce the source to sink distance. Any transmission loss associated with DC regenerated power is therefore vanishingly small.

M) Do you support the work that we have carried out to quantify AC system losses?

We strongly support this work but not necessarily the proposed outcomes.

N) Do you support further validation of the 4.82% likely to be proposed for CP5?

We strongly support further validation to quantify further efficiencies made by the improvements to the infrastructure by our investment in Track Access charges. Particularly with respect to the implementation of more accurate geographic losses per ESTA (see answer P).

O) Do you have any views on reopening the losses mark-up after two years during CP5 to reflect emerging information?

We strongly disagree with this proposal on both AC and DC operations.

For AC operations: The losses would be better set initially at a lower target level so as to incentivise Network Rail to improve the losses through infrastructure improvements and also metering of non traction electricity. A more sensible approach would be to make an adjustment for any over or under-recovery of losses within CP5 at the next periodic review. Business cases are based on assumptions about the level and structure of EC4T charges. The ability to re-open during the control period has the potential to make investment more risky.

For DC operations: We strongly believe that the risks associated with the cost of transmission losses should rest with the infrastructure manager in order to incentivise it to invest. The current regime leads to the following perverse outcomes:

- DC substations are maintained during the high peak;
- 3rd rail is only replaced where its degradation has reached the point of being unable to operate safely, rather than the economically efficient point for transmission cost;
- There is also a lack of focus on delivering sufficient capability to meet growth in the use of the network, for example arising from RUSs. Network Rail's approach can best be described as patch and mend.

In our view there are 3 options which could improve Network Rails incentives:

- Network Rail bears all transmission loss costs on the DC network;
- A cap on the transmission loss costs recovered by Network Rail;
- Set a targeted improvement in transmission losses.

However we recognise at the current time the third of these would be difficult to determine as the baseline is ill-defined.

It is our view that there is a significant mis-match between the incentives TOCs face to grow their passenger numbers and thus use of the network, and those which act on Network Rail which have led to the current unsatisfactory position.

P) Do you have any views on not geographically disaggregating the AC losses mark-up?

We strongly believe that the losses must be based on geographic/ESTA losses. For example, the average 4.82% loss rate is higher than the losses calculated on the West Coast/West Mids ESTA's. e.g. ESTA T = 3.19%. Under the current EC4T rules London Midland is being overcharged for losses on this

ESTA and because total metered usage falls below 90%, we do not get any of our over payments back through the wash-up process. This also results in perverse outcomes as our track access charges have been increased in certain areas to pay for the improvements to infrastructure and efficiencies these afford.

Q) Do you have any comments on the AC losses report published alongside this consultation?

The report is helpful in describing the current position but it does not provide sufficient justification to support the proposed changes. Why is it expected that losses over the CP5 period will increase by @ 1%? Why use historical data as the basis for this when you should expect and plan for technological improvements? It is also unclear whether the expected ESTA boundary changes open to consultation or will they be imposed unilaterally.

R) Do you support our proposal to adjust the way the EC4T delivery charge is levied?

We support this proposal, as long as metered operators are not penalised by this apportionment and that Network Rail has an incentive to negotiate the best commercial deal with Distributor operators.

S) Do you support our proposal for all freight traction electricity charges to be based on actual electricity costs faced by Network Rail from the start of CP5?

We fully support this proposal.

T) Do you support the reform of the EC4T Metering Rules to be widened and renamed the traction electricity rules?

We have no strong opinions on this proposal. Provided that EC4T remains a regulated charge within the track access contract whether it is set out in schedule 7 or a separate document is of little concern, though we question whether introducing a new document adds an unnecessary complexity and the value this proposal will add.

U) Are there any other areas which you consider should be included in the new traction electricity rules document?

We believe that the rules should permit “quasi-metering”, i.e. where a sufficient proportion of a given fleet is metered the option for metered billing should be extended to the whole fleet. A study was undertaken by Birmingham University for the Traction Electricity Steering Group which demonstrated that provided 20% of a fleet was metered the overall consumption would be measured with 98% accuracy. We believe that such an approach provides sufficient accuracy for billing and would offer an economic and efficient approach to fitting meters where the business case is otherwise weak, e.g. DC and older fleets.

V) Do you support the modification of the cost wash-up drafting to allow it to be more accurate and reflect direct price-setting arrangements?

The modification to reflect a more ‘up to date’ treatment will be very much supported as we currently buy electricity in advance. How the elements of ensuring the prices fixed by TOC’s for various months are translated back against the Network Rail billing process will obviously need to be clarified and agreed.

W) Do you have any views on the cost activities we have included in our EAU cost estimates?

We have no strong opinions on this proposal

X) *Do you have any views on the variability assumption we have used in our EAU cost estimates?*
We have no strong opinions on this proposal

Y) *Do you have any views on our proposal to use long-run cost estimates over 35 years instead of 5 years?*

Network Rail's poor understanding of the relationship between asset condition and transmission is a cause for concern as we have set out in our answer to question (O), we would therefore question whether it is able to accurately determine what the 35 year long-run costs would be. In principle we support the use of long-run (or whole life) asset costs; however it essential to recognise that improved asset knowledge or changed incentives will have impacts on short-run costs and this needs to be recognised at each periodic review. The assets in place today will not necessarily still be there in 30 years time and may not even be required depending on how the transport network evolves.

Z) *Do you have any views or suggestions about our approach to stakeholder engagement?*

Network Rail's engagement with stakeholders through the TSEG has been very good and we want this level of engagement to continue. We would also like Network Rail to consider whether they should specify further trials on both the AC & DC network to confirm the transmission loss cost data.

Please do not hesitate to contact me if you want to discuss any of the issues raised in the consultation in further detail.

Yours sincerely

Richard Stuart
Director, Rail Policy
The Go-Ahead Group plc

07970 045601
richard.stuart@go-ahead.com