



PR18: Infrastructure cost charges – Draft impact assessment of units of traffic for levying infrastructure cost charges on open access operators

September 2017

This document has been published alongside [‘PR18 consultation on charges recovering fixed network costs’](#).

Policy	Charges - Infrastructure cost charges
Policy area	Infrastructure cost charges – Unit of traffic for charging open access operators
Background	<p>In our June 2017 conclusions letter we confirmed that we will continue to work towards levying charges to recover fixed costs from all operators, through what we call ‘infrastructure cost charges’. We are now considering options for levying infrastructure cost charges on open access operators (OAOs), should we determine that they would be subject to such charges in Control Period 6 (CP6).</p> <p>A key element in determining whether OAOs will be subject to infrastructure cost charges is the market-can-bear test (‘MCB test’). The MCB test is a legislative requirement (in UK and EU law). We are currently consulting (until November 2017) on our proposals on an approach to developing a passenger market segmentation for CP6. Our final proposals will be published in the draft determination to be released in June 2018.</p> <p>OAOs operate on a commercial basis and do not have a contract with government that specifies the services they have to run or provides them with any subsidy. This means that OAOs can enter or exit the market within a control period more easily than franchised passenger operators. In addition, because OAOs do not have a contract with government, they are fully exposed to changes in access charges. This is unlike franchised passenger operators, who</p>

pay the level of access charges at the time they enter into their franchise agreement, and are held harmless to any changes in track access charges as a result of ORR's periodic review.

These features of OAOs mean that levying infrastructure cost charges on OAOs as a lump-sum charge fixed for the control period could create significant issues for both OAOs and Network Rail. A lump-sum infrastructure cost charge would expose OAOs to a large liability irrespective of their use of the network. This could distort their decisions about running services. For example, it might provide OAOs with an incentive to reduce their level of services in advance of the start of a control period and then increase their services within the control period. In addition, because OAOs would be immediately exposed to changes in charges it could cause them to exit the market. This shows a lump-sum infrastructure cost charge for OAOs could have adverse impacts on Network Rail's funding.

To avoid these risks, any infrastructure cost charges should be levied on OAOs as a rate per unit of traffic. This is consistent with our approach to recovering fixed costs from freight operators in CP5 – i.e. they pay mark-ups or infrastructure cost charges as a rate per unit of traffic.

This assessment considers three units of traffic to use for OAOs' infrastructure cost charges and their relative advantages and disadvantages. The units of traffic are assessed against the PR18 outcomes and objectives which we have previously used to assess options for changes to the structure of Network Rail's access charges.

The issue of whether OAOs should face some infrastructure cost charges was considered as part of our [December 2016 charges and incentives consultation](#) and was assessed in detail in the accompanying [impact assessment on options for fixed costs](#).

PR18 outcomes and objectives to assess each unit of traffic against

➤ **Outcome:** The network is efficient
(The network is being operated, maintained and renewed at the lowest cost, given the level of use and performance)

Objective:

- Ensure Network Rail can recover its total costs

➤ **Outcome:** The network is better used
(Network Rail and operators find ways to improve network use and accommodate new services)

	Objectives: <ul style="list-style-type: none"> • Ensure operators take costs of service into account when using the network • Ensure all parties are incentivised to maximise value of capacity in use • Ensure capacity is allocated on the basis of the cost of provision and value of use
Options to be considered	
Option 1: Rate per train mile	<ul style="list-style-type: none"> • OAOs would pay infrastructure cost charges set as a rate per train mile. • When a train travels one mile that is one train mile. A train mile does not depend on any other characteristics of the train, such as number of carriages, weight or number of passengers.
Option 2: Rate per vehicle mile	<ul style="list-style-type: none"> • OAOs would pay infrastructure cost charges as a rate per vehicle mile. • The number of vehicle miles a train runs is the number of carriages on a train multiplied by the number of train miles.
Option 3: Rate per passenger kilometre	<ul style="list-style-type: none"> • OAOs would pay infrastructure cost charges as a rate per passenger kilometre. • The number of passenger kilometres a train runs is the number of passengers on the train multiplied by the number of kilometres the train travels.
Assessment of options	
Outcome: The network is efficient Objective: Ensure Network Rail can recover its total costs	
<p>Levying infrastructure cost charges on OAOs as a rate per unit of traffic (regardless of the unit of traffic chosen) means Network Rail would face the risk of variations in the infrastructure cost charges income it receives from OAOs during a control period. However, due to differences in the ability to accurately forecast each unit of the traffic, the size of this risk for Network Rail varies depending on the unit of traffic used.</p> <p>If infrastructure cost charges are levied on OAOs, Network Rail will forecast the income it expects to receive from these charges paid by OAOs in each control period. Therefore the unit of traffic used to calculate the charges will affect the accuracy of Network Rail's forecasts. If the outturn of the unit of traffic was lower than the forecast, Network Rail will have a funding shortfall. Conversely, if the outturn of the unit of traffic is above the level forecast, Network Rail will receive a revenue increase.</p>	

If OAOs' infrastructure cost charges are levied as a rate per vehicle mile, Network Rail's income would vary when an OAO changed the length of the trains it runs. If levied as a rate per passenger kilometre, Network Rail's income would vary in response to changes in the number of passengers using open access services. Changes to either the length of OAOs' trains or number of passengers could occur relatively suddenly and due to wider economic factors such as economic growth. This makes it difficult to accurately forecast OAOs vehicle miles and passenger kilometres over a control period.

If levied as a rate per train mile, Network Rail's income from OAOs' infrastructure cost charges would vary if the number of open access services on the network increased or decreased or if the distance those services travelled changed. The number of open access services change because an OAO changes the routes it operates or enters or exits the market. These occurrences could happen at any time during a control period and even after services have been included in the timetable. However, this is likely to be less common and more predictable than OAOs changing the length of their trains or the number of passengers that use their services. For example, between 2014/15 and 2016/17 total OAO train miles increased by less than 2% while passenger kilometres on open access services increased by more than 15%. The reason OAOs' train miles are relatively stable is mainly because OAOs have access agreements with Network Rail that give OAOs rights to run a number of services between certain destinations.

This shows that it is likely to be easier to accurately forecast OAOs' train miles over a control period, compared to vehicle miles or passenger kilometres. This means that out of the three units of traffic considered in this assessment, levying OAOs infrastructure cost charges as a rate per train mile would allow Network Rail to recover its total costs with the highest degree of predictability.

Outcome: The network is better used

Objective: Ensure operators take costs of service into account when using the network

The length of trains is a key driver of wear and tear on the network, this is why the charge designed to recover these costs, the variable usage charge (VUC), is levied as a rate per vehicle mile. However, analysis by Network Rail as part of the new fixed cost allocation methodology (available [here](#)) did not show that the length of trains is a significant driver of fixed costs on the network. Therefore levying OAOs infrastructure cost charges as a rate per vehicle mile would not reflect the evidence on the drivers of the long-run fixed costs of using the network.

Network Rail's analysis also showed that one of the main drivers of fixed costs is the additional infrastructure required to accommodate the higher number of trains that run during peak times of day, for example needing track sections with multiple track. Levying the charge as a rate per passenger kilometre would mean OAOs pay higher infrastructure cost charges to run during peak times, since the number of passengers using the network is higher. As a result, a rate per passenger kilometre would encourage OAOs to consider the long-run fixed costs of running their trains during busy periods.

Fixed costs are also driven by new services being added to the network. Levying OAOs' infrastructure cost charges as a rate per train miles would reflect the evidence about what costs they cause when they run new services.

Outcome: The network is better used

Objective: Ensure all parties are incentivised to maximise value of capacity in use

If OAOs' infrastructure cost charges were levied as a rate per vehicle mile or passenger kilometre, their charge would depend on the length of train and number of passengers, respectively. This would affect operator's decisions about the types of services they put on, and may lead OAOs to run services that do not make best use of the existing network capacity. If charges were levied as a rate per vehicle mile, OAOs may be deterred from running longer trains. While if a rate per passenger kilometre was used, OAOs may be discouraged from changing their prices to fill empty seats if the additional fare income is not expected to exceed the additional charges.

A way to address these issues with levying OAOs as a rate per vehicle mile or passenger kilometre would be to use a cap. If OAOs' infrastructure cost charges were levied as a rate per vehicle mile the number of carriages OAOs are charged for could be capped. While if OAOs' infrastructure cost charges were levied as a rate per passenger kilometre, a cap could be set as a proportion of the seats that are filled on each train. A cap under either option would reduce the increase in OAOs' infrastructure cost charges when they run longer trains or more passengers use their services. If we conclude OAOs infrastructure cost charges should be levied as a rate per vehicle mile or passenger kilometre we will consider in more detail if a cap should be used and if so what level it should be set at. However, we are mindful of the additional complexity that this might introduce and the difficulties in setting any cap at the right level.

In contrast, levying the charges as a rate per train mile would have less of an impact on OAOs incentives to make best use of the network. This is because OAOs would not be able to minimise their charge by changing the type of services that they currently run, only by removing a service.

Outcome: The network is better used

Objective: Ensure capacity is allocated on the basis of the cost of provision and value of use

If OAOs' infrastructure cost charges were levied as a rate per vehicle mile, Network Rail would be incentivised to allocate capacity on the basis of the length of trains OAOs plan to run. As explained above, it is not clear that the length of trains is a significant driver of long-run fixed costs. This means a rate per vehicle mile would not encourage Network Rail to consider the long-run costs OAOs cause when allocating capacity.

We have shown that levying infrastructure cost charges on the basis of passenger kilometres and train miles reflects the drivers of fixed costs. This means either of these

units of traffic could be used to send signals to Network Rail about the long-run fixed costs an OAO's service would cause the network.

General objectives

An important consideration is the transitional costs Network Rail would face to bill OAOs using each unit of traffic.

Train miles and vehicle miles are already used to bill operators for existing charges, such as the VUC and the capacity charge. Therefore, Network Rail's billing system would require minimal changes to levy infrastructure cost charges on OAOs using these units of traffic.

Passenger kilometres are not currently used to bill operators for any track access charges. ORR collects passenger kilometre data for OAOs, using data from the LENNON ticketing and revenue database and passenger operators, but Network Rail does not. This means Network Rail would likely face significant transitional costs to obtain the data and update its billing system to record OAOs' passenger kilometres.

Recommendation

- **We recommend Option 1, levying OAOs infrastructure cost charges as a rate per train mile.**
- Compared with vehicle miles and passenger kilometres, a rate per train mile sends better signals to the operators about making efficient use of the railway (by filling empty seats and running longer trains).
- There is evidence that suggests that train miles are more closely linked to the long-run fixed costs on the network.
- In addition, data on operators' train miles is readily available making it relatively simple for Network Rail to bill OAOs using this unit of traffic.

Next Steps

- Obtain industry views on this proposed option through our September 2017 consultation on infrastructure cost charges. These will inform our next steps in terms of working with Network Rail to develop the implementation plan.
- Use results of the market segmentation and ability-to-bear analysis to determine more detailed application of infrastructure charges for OAOs.



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