

Explanatory note on charges & incentives impacts model for PR18

July 2017

Summary

As part of PR18, we will need to assess the overall financial impacts on train operators of changes to charges and incentives that we propose to make for control period 6 (CP6). To support this, we have developed a model to estimate these impacts. While we are continuing to refine and improve the model, in July 2017 we made available a version of it with the aim of indicating to stakeholders the form of modelling we plan to undertake. In particular, this is to provide transparency on the limitations of the model and, reflecting this, the types of additional information that would be useful for stakeholders to share with us to supplement the evidence that the model will provide.

Background

As part of PR18, ORR is reviewing the structure of Network Rail's access charges and incentives. On 15 December 2016, we published a consultation setting out our policy proposals on access charges and incentives for the next control period.

1. In June 2017, we set out conclusions on a range of charges and contractual incentives including infrastructure cost charges, variable charges, station charges and Schedules 4 and 8.
2. However, we will still need to take a number of policy and implementation decisions in the coming months. In September 2017, we will consult on aspects of our infrastructure costs charging approach (including emerging findings from the on-going market-can-bear analysis), Schedule 4 policy and (if required) Schedule 8. A further consultation in November will cover aligning incentives (e.g. the route-level efficiency benefit sharing mechanism (REBS)) and the volume incentive.
3. The decisions we will be taking over the next year will together have a significant bearing on the overall financial impact of charges and incentives on operators. In particular, taking account of the level of all other charges, we will use the results of the market-can-bear analysis to determine the level of mark-ups for different market segments. Over the coming months, we will also be deciding on the appropriate benchmarks and payment rates for Schedules 4 & 8.
4. We will have regard to our statutory duties when taking these decisions. These duties include promoting efficiency and economy on the part of persons providing railway services, having regard to protecting the interests of users of railway services, enabling persons providing railway services to plan the future of their businesses with

a reasonable degree of assurance and having regard to the funds available to the Secretary of State.

5. Therefore, one part of our considerations relates to understanding the financial impacts of our proposals on different types of operators. We plan to do this in a number of ways, not least through close engagement with operators.
6. To support this work, we have also developed a financial model that will help to estimate some of the financial impacts of a series of charges decisions. This model is inevitably a highly simplified representation of the impacts, and requires a significant number of assumptions to be made in order for it to work. However, it can provide useful evidence of the broad impacts that might result from different policy decisions. Reflecting this, the model is one of the tools we will use to inform our decision-making. It is, of course, not the only source of evidence that the ORR will use.
7. It was developed by ORR with the help of Europe Economics. The model (in its form and scope) was shared and discussed with the industry's representatives (including RDG, Network Rail, FOCs and TOCs) whose inputs greatly contributed to its refinement. While the model has already been subjected to internal and external quality assurance, we are continuing to refine and improve how it works and it will of course be subject to further quality assurance following this and when we come to use the model in our decision making.
8. Our intention in making available the structure of the model at this stage is to be transparent about the kind of analysis that we intend to conduct, although we will continue to refine and improve the model as policy develops. In particular, we hope that this will provide stakeholders with sufficient understanding of the nature of this modelling so that they are well placed to understand its limitations and, therefore, the types of additional information that it might be useful to share with ORR.
9. Many of the data inputs used in the model are not publicly available because of reasons of confidentiality. As such, we are making the model available with only dummy traffic data and for confidentiality we have removed references to individual operators. This approach means that we can make the structure of the model available in a timely way, as it avoids the lengthy process that would be required to share the model in a different form. However, this also means that stakeholders cannot use it to estimate the impact of various decisions on operators.

Purpose of this note

10. This note explains the scope and features of the spreadsheet model that we have developed, the final version of which we will use to support our understanding of the financial impacts of the potential changes in track access charges and contractual incentives later in PR18. Alongside this note, we have made available a summarised

version of the model, with dummy input data. This can be accessed here:
<https://orr.box.com/s/bc0k8s84c7y2148q4ohjshaddoyhkqyc>

11. There are some important limitations to the current version of the spreadsheet model, notably:
 - (a) we do not yet have estimates of the likely levels of certain charges (these estimates will only be known when Network Rail publishes its draft price lists in February 2018);
 - (b) it only seeks to model a set of charges, as set out below, and does not model the impact of potential new mark-ups;
 - (c) due to the complexity involved in modelling a number of charges and incentives (notably Schedule 8¹), we have adopted a simplified approach to capturing the broad magnitude of impacts from these charges and incentives; and
 - (d) given that some input data used in the model is not publicly available, the version we have made available uses dummy input data.
12. Therefore, the spreadsheet model only models a sub-set of the direct financial impacts. More generally, we are conscious that the impacts on individual companies cannot be fully modelled in this way, and we will continue to work closely with stakeholders to understand these impacts.
13. As PR18 progresses, we will update the model as we receive information from Network Rail about, for example, track access charge levels and as we reach decisions on outstanding issues around charges and incentives. As our internal analysis develops, the results of this model will, together with the market-can-bear analysis, inform our proposals on the level of mark-ups for different market segments (which will be set out in our draft determination).

The model's scope and key features

14. The model's baseline is 2018/2019 i.e. the end of CP5. It calculates the changes in the overall level of charges in CP6 compared to CP5 as a result of our policy proposals on the structure of charges and incentives.
15. Traffic data used in the model is based on actual traffic up to financial year 2016/17, to which user-defined growth rates can be applied for the remaining years of CP5 and for CP6². For our analysis we will use Network Rail's traffic forecasts as and when they become available. In cases where we do not have sufficient actual traffic data (e.g. for charter services) we have used averages and/ or assumed volumes (as

¹ For reasons of confidentiality we have removed schedule 8 benchmarks and payment rates.

² The version that we have made available only uses dummy traffic data.

far as this is possible) which will be replaced as soon as actual data becomes available.

Scope of the model

16. The model currently covers the following charges and incentives: fixed track access charges, freight specific charge, freight only line charge, variable usage charge (VUC), capacity charge and coal spillage charge. The model reports changes at sector level i.e. franchised passenger, open access and freight, although it does also contain functionality that allows some analysis at individual operator level.
17. The main exclusions from the model are set out below.
 - (a) The model currently excludes Schedule 4 because the main policy decisions about Schedule 4 are subject to consultation later in the year, but we will update our analysis of Schedule 4 once any proposals have been identified.
 - (b) The model also excludes modelling of any potential mark-ups for passenger operators or changes in the level of freight mark-ups and the freight market segments in scope for mark-ups as these are subject to the market-can-bear analysis currently underway and a consultation later this year.
 - (c) We are still exploring how to model the station long-term charge (LTC) particularly due to the proposal to improve the methodology for calculating the charge at managed stations, which Network Rail will consult on over summer 2017.
 - (d) Electric current for traction (EC4T) charge is excluded from this version of the model as variations in the charge depend on power market prices and power consumption, rather than being a feature of ORR policy decisions. However, we have modelled it separately (with the electrification asset usage charge).
 - (e) Although the model contains some preliminary modelling of Schedule 8, this will be refined as we get more clarity on important aspects such as benchmarks and payment rates.

The model's key features

18. For each type of operator (franchised passenger, freight, open access passenger and charter), the model compares CP5 and CP6 by calculating the following:
 - (i) the estimated impact of policy changes: The overall magnitude/scale of the impact of our proposed policy changes and the relative magnitude/scale of changes to different charges (and incentives). This holds CP5 traffic and Network Rail cost levels constant and evaluates the impact of policy (and rates) changes in charges (and incentives) only; and
 - (ii) the estimated impact of traffic changes: The overall and relative magnitude/scale of the impact of changes in traffic forecasts for each

charge (and incentive) and for each category of operator. This holds the CP5 charges policy and Network Rail cost levels and rates constant and evaluates the financial impact of changes in traffic forecasts only.

19. The model also allows some scenario testing, including around input assumptions such as Network Rail’s cost levels. It allows us to understand the separate and combined impact of policy changes, traffic changes and changes to other key variables such as Network Rail’s efficiency.

Next steps

20. The final version of this model will be used to inform our final decisions on our PR18 proposed changes in track access charges and incentives, and will be particularly relevant to those decisions that are more likely to have a material impact on the financial impact on operators. This includes the decisions regarding Schedule 4, Schedule 8 benchmarks and payment rates as well as the application of mark-ups to recover fixed costs.
21. The model will continue to be updated as new information becomes available and decisions on outstanding aspects of charges and contractual incentives are made. In this context, the following table summarises the main PR18 milestones whose achievement will impact on the refinement of this model.

Activity	Date
ORR’s market segmentation and market-can-bear test – analysis for freight and passenger	Spring/summer 2017 Engage with industry throughout.
Network Rail’s charges consultation covering the detailed recalibration of charges for CP6	Publication: Summer/early Autumn 2017 Responses deadline: Autumn 2017 Conclusions (incl. draft CP6 price lists): February 2018
ORR consultation: Infrastructure cost charges, Schedule 4, and, if required, Schedule 8	Publication: September 2017 Responses deadline: November 2017 Conclusions: February 2018
ORR consultation: Aligning incentives (e.g. REBS) and Volume Incentive	November 2017
ORR’s draft determination	June 2018
Network Rail’s post draft determination price lists	August 2018
ORR’s final determination	October 2018
Network Rail’s final CP6 price lists	December 2018



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