



2018 periodic review final determination

**Supplementary document – Charges
and incentives: Infrastructure cost
charges conclusions**

October 2018

Contents



About this document	4
Summary	6
Introduction	8
Purpose and scope of this document	9
Structure of this consultation	12
1. Network Rail's new cost allocation methodology	13
Introduction	13
Existing approaches for allocating fixed costs to services	13
Network Rail's new cost allocation methodology	13
Network Rail's September 2017 consultation	17
Overview of our June 2018 proposals	18
Summary of stakeholder views	19
Our determination on the approach to allocating fixed costs to services in CP6	20
2. Infrastructure cost charges for freight services	21
Introduction	21
Policy Development	21
Overview of our June 2018 proposals	23
Stakeholder responses to June 2018 consultation	25
Consideration of stakeholder responses in our final determination	26
Our determination on freight infrastructure cost charges in CP6	26
3. Infrastructure cost charges for passenger services	28
Introduction	28
(a) Open access operators	29
(i) Passenger market segmentation	29
(ii) Infrastructure cost charges and our access policy	31
(iii) Arrangements for existing and new open access services	32
(iv) Charging unit for open access operators	34
(v) Level of infrastructure cost charges for open access services in CP6	35
Summary of stakeholder views	36
Treatment of recently approved open access services	38
Our determination on open access operator infrastructure cost charges in CP6	40

(b) Franchised passenger operators	42
(i) Market segmentation for franchise passenger operators	42
(ii) Approach for levying infrastructure cost charges on franchised passenger operators	42
Summary of stakeholder views	45
Consideration of stakeholder responses in our final determination	47
Our determination on franchise passenger operator infrastructure cost charges in CP6	48
Annex A: Summary of CEPA and Systra’s analysis of market segmentation for passenger services	49
Annex B: Definition for new entrant open access operators	52
Annex C: Examples of the application of ICCs to services falling into more than one market segment	54

About this document

The [2018 periodic review](#) (PR18) is the process through which we determine what Network Rail¹ should deliver in respect of its role in operating, maintaining and renewing its network in control period 6 (CP6)² and how the funding available should best be used to support this. This feeds through into:

- the service that passengers and freight customers receive and, together with taxpayers, ultimately pay for; and
- the charges that Network Rail's customers, including passenger, freight and charter train operators, will pay for access to its track and stations during CP6.

In June 2018, we consulted on our [PR18 draft determination](#)³, setting out our proposed decisions in all of the main areas of PR18. Following receipt of consultation responses, we have reviewed stakeholders' comments and these have helped to inform the final decisions set out in our final determination. We are grateful to all those who responded to the consultation.

Accordingly, the [final determination](#) sets out our overall decisions on PR18. Among the documents that we have published is an [overview document](#), setting out:

- our decisions in all the main areas of PR18;
- a summary of how we will regulate Network Rail's delivery in CP6; and
- next steps in PR18.

In addition, there are high-level summaries of our main decisions for each of [England & Wales](#) and [Scotland](#).

We have also published a [document](#) summarising stakeholders' comments on the PR18 draft determination and our response to these.

The full set of documents that form the final determination is set out in the box overleaf⁴.

¹ All references to Network Rail in this document are to Network Rail Infrastructure Limited.

² CP6 will run from 1 April 2019 to 31 March 2024.

³ The full suite of PR18 draft determination documents are available from this [webpage](#). To access earlier consultation and conclusions documents that led up to the PR18 draft determination, please see the map of these documents [here](#).

⁴ Our policy on managing change will be published in November 2018. Some documents, such as the consultancy and reporter studies, will be published shortly after the final determination.

Our final determination documents (includes weblinks)

PR18 final determination overview document		
England & Wales summary	PR18 draft determination consultation – summary of comments and our response	
Scotland summary (and settlement details)	Supplementary documents	
Settlement documents	SBP assessment	
FNPO route		
System Operator		
England & Wales		Scorecards and requirements
		Health & safety
	Review of NR's proposed costs	
	Other single till income	
	Stakeholder engagement	
	Policy	Financial framework
		Review of network licence: conclusions from consultation
Overview of charges & incentives decisions		
Infrastructure cost charges conclusions		
Variable usage charge conclusions		
Anglia route		
LNE & EM route		
LNW route		
South East route		
Wales route		
Wessex route		
Western route		
Other documents		
Glossary	Managing Change Policy	
Consultancy & reporter studies	Grading of Network Rail's route and System Operator strategic plans for CP6	

Summary

Access charges are important as they affect the decisions that Network Rail, train operators and funders make about use of the rail network. They play an important role in improving outcomes for passengers, freight customers and taxpayers.

As part of the 2018 periodic review (PR18) of Network Rail, we have reviewed the charges operators pay to access the rail network to help improve decisions made by Network Rail, train operators and funders.

As part of our charging review, one of the reforms we have chosen to prioritise is the charges that recover some of the fixed costs of running the rail network, i.e. those costs that do not vary with use in the short-term. We have called these charges infrastructure cost charges (ICCs). The aims of this reform are to:

- improve transparency around the fixed costs of the network, and their drivers;
- ensure that all operators make a contribution towards fixed network costs, to the extent that they are able to; and
- promote further competition in the provision of passenger services.

In CP5, fixed network costs are met through a mix of direct grant from governments (around £4bn per year), fixed charges paid by franchised passenger operators (around £500m per year), and mark-ups paid by freight services carrying specific commodities (around £2m per year). There are also charges which operators pay for use of stations on the network, which cover both variable and fixed costs.

In September 2017, we consulted on some areas of the infrastructure cost charging approach⁵, including: the market segmentation for freight services; a potential approach for defining market segments for passenger services; and the design of ICCs for passenger services. We also consulted on the technical analysis undertaken by our consultants, CEPA and Systra⁶. In September 2017, Network Rail also consulted on the new methodology it had been developing for allocating fixed network costs to all services running on the network. It was intended that this new cost allocation could inform ICCs in CP6. Subsequent work to enable us to finalise proposals included commissioning additional analysis in relation to biomass services, following feedback received to our September 2017 consultation.

⁵ *PR18 consultation on charges recovering fixed network costs*, Office of Rail and Road, September 2017. This may be accessed [here](#).

⁶ *PR18 Structure of charges review – Market can bear analysis: Freight services*, Cambridge Economic Policy Associates, September 2017. This may be accessed [here](#). And *PR18 Structure of charges review – Market can bear analysis: Passenger services*, Cambridge Economic Policy Associates & Systra, September 2017. This may be accessed [here](#).

We set out our final proposals on the infrastructure cost charging approach in our June 2018 consultation on ICCs in CP6⁷. This conclusions document discusses the main points raised by stakeholders in response to our June 2018 consultation on ICCs in CP6 and outlines our final position. The key conclusions made within this document are to:

- use the new cost allocation methodology to allocate fixed costs to services, excluding the elements of the methodology that allocate non-avoidable costs to services;
- retain the existing market segmentation for freight services, and continue to allow Network Rail to levy ICCs/mark-ups on freight trains carrying electricity supply industry (ESI) coal, iron ore, and spent nuclear fuel;
- allow Network Rail to levy ICCs on freight trains carrying ESI biomass in CP6. This charge will be phased in over CP6;
- define two market segments for open access operator (OAO) services: interurban and other services. We determined that services in the interurban market segment are able to bear ICCs in CP6;
- not levy ICCs on existing OAOs in CP6. This would be unless they apply for (and are granted) different access rights that fall within the interurban market segment;
- update our access policy to reflect the introduction of the ICCs;
- phase in ICCs on interurban services for new entrant OAOs;
- set the ICC for open access services or parts of services that are categorised as part of the interurban market segment in CP6 at £4 per train mile;
- not to define further sub segments under the high level market segment of “services within the framework of a public service contract” (franchise services); and
- vary ICCs (fixed track access charges) for franchised passenger operators based on variations in timetabled train miles (on an annual basis, and adjust them ex-post to reflect outturn).

⁷ 2018 periodic review draft determination: *Supplementary document – Charges and incentives: Infrastructure cost charges consultation*, Office of Rail and Road, June 2018. This may be accessed [here](#).

Introduction

1. As part of PR18, we have reviewed the charges operators pay to access the rail network and the information available about the link between costs and operators' use of the network.
2. The charges train operators pay to access the network are a combination of:
 - charges recovering variable costs – e.g. the variable usage charge (VUC), or the electrification asset usage charge (EAUC); and
 - charges recovering fixed costs – e.g. the Freight Specific Charge (FSC) and the Freight Only Line (FOL) charge, or the fixed track access charge (FTAC) paid by franchised passenger operators.
3. This document covers charges that recover Network Rail's fixed costs, i.e. those costs that do not vary in the short-term.
4. For CP6, we have called these ICCs. These charges are levied as mark-ups on the directly incurred costs (which Network Rail recovers primarily through the VUC), in accordance with the requirements of the European and domestic legislation⁸.
5. We have also made a number of other policy decisions in relation to the charging structure for CP6, which are set out in the PR18 final determination supplementary document on charges and incentives⁹. Annex A of that document provides a high-level overview of the proposed charging structure for CP6, for different types of operators.
6. Applying charges to recover fixed costs from all operators has the potential to improve the incentives and information available to Network Rail, operators and funders when making decisions about use of the network. It also builds on the findings and recommendations made by the Competition and Markets Authority as part of its review of on-rail competition¹⁰. This approach has the potential to improve competition between passenger services over the longer-term. This is because it would allow open access operators to contribute towards fixed costs where they are able to, and benefit from greater access to the network.

⁸ The requirements for setting railway access charges are found in the Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016 (the "2016 Regulations"), which implement the underlying European directive 2012/34/EU ("Directive 2012/34") establishing a single European railway area (recast).

⁹ *2018 periodic review final determination: Supplementary document – Overview of charges and incentives decisions*, Office of Rail and Road, October 2018. This may be accessed [here](#).

¹⁰ *Competition in passenger rail services in Great Britain: A policy document*, Competition & Markets Authority, March 2016. This may be accessed [here](#).

7. We consulted on elements of our ICC policy in September 2017 and June 2018. We have since had discussions with stakeholders, and undertaken further analysis, in order to conclude on our policy.

Purpose and scope of this document

8. This document discusses the main points raised by stakeholders in response to our June 2018 consultation on ICCs¹¹ in CP6 and outlines our final position, supplementing the information provided on ICCs within the PR18 final determination¹².
9. The key areas in which we are finalising our position are:
 - how costs are allocated to services (cost allocation);
 - which services (i.e. market segments) are potentially subject to an ICC (determined through a market-can-bear (MCB) test);
 - the structure/design of ICCs; and
 - the level of the charge for each market segment.
10. Over the last 18 months, we have been developing our approach in all of these areas, in consultation with Network Rail, governments and industry. We have consulted on proposals in some areas. In other areas (e.g. the cost allocation), Network Rail led the consultation process.
11. There are certain areas (including the implementation of ICCs) where we have not yet set out firm proposals. Where it is appropriate to do so, we will consult on the detail for these issues shortly after the final determination so that our final positions can be established ahead of start of CP6.
12. Table 1 provides an overview of what we have said to date in each of these areas, and what we have set out as part of the final determination.

¹¹ 2018 periodic review draft determination: Supplementary document – Charges and incentives: Infrastructure cost charges consultation, Office of Rail and Road, June 2018. This may be accessed [here](#).

¹² 2018 periodic review final determination – Overview of approach and decisions, Office of Rail and Road, October 2018. This may be accessed [here](#).

Table 1: Position to date on ICCs

Area of proposals	Position to date
<p>Approach to allocating costs</p>	<p>Network Rail consulted on its new cost allocation methodology in September 2017 – we reviewed responses to its consultation, as well as feedback we received in relation to the new methodology in response to our September 2017 consultation.</p> <p>In June 2018 we consulted on using Network Rail’s new cost allocation methodology, excluding the elements of the methodology that allocate non avoidable costs to services, to set ICCs in CP6.</p> <p>Our final decision around the use of Network Rail’s new cost allocation methodology in CP6 is set out in Chapter 1.</p>
<p>Market segmentation</p>	<p>In 2017, we appointed consultants to undertake analysis to inform our PR18 MCB assessment for both freight and passenger services. This involved reviewing the MCB assessment for various freight commodities, and developing an approach to defining market segments for passenger services (not previously undertaken).</p> <p>Freight</p> <p>In September 2017 we consulted on:</p> <ul style="list-style-type: none"> • retaining the existing approach to market segmentation; • continuing to define freight trains carrying electricity supply industry (ESI) coal, iron ore and spent nuclear fuel, as market segments able to bear ICCs in CP6; and • defining trains carrying ESI biomass as a market segment able to bear ICCs in CP6. <p>In our June 2018 consultation, we set out final proposals around the freight market segments should be in scope for ICCs.</p> <p>In this conclusions document, we set out in Chapter 2 our final policy position that freight trains carrying ESI coal, iron ore, spent nuclear fuel and ESI biomass can bear ICCs in CP6.</p> <p>Passenger</p> <p>In September 2017, we set out emerging findings from our consultants’ work on the types of services that appear to have the ability to pay ICCs. We said that these emerging results could inform a market segmentation.</p> <p>In June 2018, we set out final proposals around the passenger market segmentation, for both franchised operators and OAOs.</p> <p>In this document, we set out in Chapter 3 our conclusions on market segmentation for both OAOs and franchised operators in CP6.</p>
<p>Structure/design of the charge</p>	<p>Freight</p> <p>In our June 2017 charges and incentives conclusions letter¹³, we confirmed our decision to merge the two existing freight mark-ups. In</p>

¹³ *Charges and contractual incentives – consultation conclusions*, Office of Rail and Road, September 2017. This may be accessed [here](#).

Area of proposals	Position to date
	<p>our September 2017 consultation, we proposed not to make any other changes to the design of ICCs for freight services.</p> <p>Passenger</p> <p>In our September 2017 consultation, we proposed levying ICCs for open access services as a rate per train mile. As the responses to our September 2017 consultation generally supported this proposal, we continued to propose it in our June 2018 consultation.</p> <p>For franchised passenger operators, in our September 2017 consultation we proposed to retain the existing approach to recovering fixed costs– i.e. they would continue to pay a lump-sum FTAC. However, we proposed to vary this lump-sum payment based on differences between forecast and actual timetabled train miles. In June 2018, we continued to propose this approach for franchised passenger operators, however we also consulted on some of the more detailed aspects of the proposal.</p> <p>In Chapter 3, we set out our final determination on the design of ICCs for open access and franchised passenger services.</p>
<p>Level of the charge for each market segment</p>	<p>The level of ICCs for each market segment is informed by our assessment of what the market can bear, and by changes in the overall level of other charges. This included ORR policy decisions around charges and incentives, recalibration of charges, and changes in Network Rail’s cost base.</p> <p>We developed a PR18 charges and incentives impact model, which allowed us to understand the scale of changes in the level of charges for various segments (e.g. commodities) or types of operators (e.g. franchise passenger versus open access) resulting from policy changes and recalibration.</p> <p>In this conclusions document, we set out the level of ICCs for the market segments that we have proposed should pay these charges in CP6. These levels are set out in the chapters relating to freight (Chapter 2) and passenger services (Chapter 3) respectively.</p>

13. We outlined in our September 2017 consultation and in more detail in our June 2018 consultation that, should we conclude to levy ICCs on all types of operators (including OAOs) in CP6, we will need to revisit our access policy (including the not-primarily abstractive test), to determine what changes might be needed. We will be consulting on changes to our access policy towards the end of 2018. We provide more detail on this in Chapter 3a.

Indexation of charges to CPI

14. We have concluded that in CP6 we will move from RPI to CPI for the inflation indexation of track access charges (and other payment rates where we set the method of indexation) and this will apply to the ICC charges set out in this document. Further information on inflation indexation is provided in our [‘Financial framework’](#) supplementary document and our approach for the indexation of all of the charges in

CP6 is detailed in Annex B of our ‘Overview of charges and incentives [decisions](#)’ document.

Structure of this consultation

15. The rest of this consultation document is structured as follows:
 - **Chapter 1:** Network Rail’s new cost allocation methodology;
 - **Chapter 2:** Infrastructure cost charges for freight services; and
 - **Chapter 3:** Infrastructure cost charges for passenger services – a) open access operators and b) franchised operators.

16. We are also publishing a number of supporting documents alongside this conclusions document:
 - final impact assessment on the Network Rail cost allocation methodology¹⁴;
 - final impact assessment on the detailed design of franchised passenger operator ICCs¹⁵; and
 - responses to our June 2018 consultation¹⁶.

¹⁴ *Final impact assessment on Network Rail’s cost allocation methodology*, Office of Rail and Road, October 2018. This may be accessed [here](#).

¹⁵ *Final impact assessment on the detailed design of franchised passenger operator ICCs*, Office of Rail and Road, October 2018. This may be accessed [here](#).

¹⁶ *Consultation on the draft determination – Summary of comments and our response*, Office of Rail and Road, October 2018. This may be accessed [here](#).

1. Network Rail's new cost allocation methodology

Introduction

- 1.1 In order to calculate the ICC for any market segment, the first step is to determine the level of fixed costs allocated to different types of services. The level of fixed costs allocated to a service is the maximum ICC payable.
- 1.2 This chapter covers the development of Network Rail's new fixed cost allocation methodology, our assessment of the new methodology and our conclusions on the approach for allocating fixed costs to different types of services in CP6.

Existing approaches for allocating fixed costs to services

- 1.3 The current approaches used to allocate Network Rail's fixed costs to services vary by type of operator, as follows.
 - **Freight services:** in PR13, Network Rail appointed consultants to estimate freight avoidable costs (i.e. those costs which would be avoided in the long-run if freight services stopped using the network), and allocate those to different freight market segments (i.e. commodities)¹⁷.
 - **Franchised passenger services:** FTAC is calculated by allocating Network Rail's net revenue requirement for each route¹⁸ to franchised passenger operators based on their forecast usage of that route for each year of the next control period.
 - **Open access passenger services:** no fixed costs are currently allocated to open access passenger services (even notionally).

Network Rail's new cost allocation methodology

- 1.4 In 2014, Network Rail appointed Brockley Consulting to undertake a review of cost allocation approaches in the rail industry, and explore potential alternatives.

¹⁷ *Estimating Freight Avoidable Costs*, L.E.K. Consulting, October 2012. This may be accessed [here](#).

¹⁸ The net revenue requirement (in this case) is defined as the total revenue required by Network Rail over the control period, minus revenue from all other charges and sources of income. The net revenue requirement is allocated to operators to calculate the pre-grant FTAC, and then the Network Grant paid by governments to Network Rail is netted off as a last stage in the calculation, to determine the final FTAC value, which is included on the price list. Network Grant is subtracted from each operator's pre-grant FTAC in proportion to its share of total FTAC.

- 1.5 Network Rail first completed a pilot study for a new cost allocation methodology on the Wales route¹⁹. The methodology developed for the pilot study was subsequently applied to the rest of the network.
- 1.6 The focus of the new methodology is on allocating Network Rail's fixed costs (i.e. those costs that do not vary with use in the short-term) to train services. These include the costs of operating, maintaining, renewing and enhancing the rail network. For each cost category, the new methodology seeks to establish a link between use (specifically different types of use – e.g. heavy versus light trains) and how costs vary in the long-run. Where a link between use and costs can be established, the methodology talks about traffic related “avoidable costs” (i.e. because these costs could be avoided, in the long-term, if that specific type of traffic ceased to operate). Where a link cannot be established between a specific use and costs (i.e. costs are driven by the existence of a network in general, rather than by a specific type of traffic), the methodology talks about the “non-avoidable costs” associated with having a minimal traffic network.
- 1.7 The new methodology developed by Network Rail makes several refinements to the current (CP5) methodology for allocating FTAC (and Network Rail's fixed costs more generally) to franchised passenger operators. We provide a high-level overview of each of these refinements below. More detail on each refinement is available in the technical report produced by Brockley Consulting for Network Rail²⁰.

Allocate costs to all operators

- 1.8 Network Rail's fixed costs are allocated to all operators (i.e. including freight operators and OAOs), based on each operator's share of specified traffic metrics (the same metrics as those used as part of the CP5 FTAC allocation methodology)²¹.

Geographical disaggregation of the cost base

- 1.9 The costs for each Network Rail route are allocated to smaller units of the network, specifically route sections. The costs of each route section are allocated to services

¹⁹ *Cost allocation pilot study: modelling and results*, Brockley Consulting, June 2016. This may be accessed [here](#).

²⁰ *A new method for allocating network fixed costs*, Brockley Consulting, September 2017. This may be accessed [here](#).

²¹ The methodology also allocates costs to all operators that run on the Scotland operating route, and franchised passenger operators specified by Transport Scotland are allocated costs on all the routes they run on. However, for franchised passenger services Network Rail has included a ‘funding adjustment’ to maintain the current approach of only allocating costs on the Scotland route to Scottish franchised operators and not to allocate any costs to Scottish franchised operators for the other routes they run on. This is to reflect the existing funding arrangement between Department for Transport and Transport Scotland. It should be noted that even after the funding adjustment, costs on the Scotland route are allocated to freight and open access services.

running on each section using specified traffic metrics (the same metrics as those used as part of the CP5 FTAC allocation methodology).

Avoidable cost approach

- 1.10 The new Network Rail cost allocation methodology distinguishes between two types of avoidable costs:
- 'traffic characteristic' avoidable costs; and
 - 'vanilla' traffic avoidable costs to services.
- 1.11 Network Rail has labelled these two cost categories, together, as "traffic related avoidable costs".
- 1.12 Traffic characteristic avoidable costs are the costs that would be avoided by removing traffic with specific characteristics, such as high-speed or electrified trains. The traffic characteristic avoidable costs are allocated only to the services with those characteristics, as part of the new cost allocation methodology. For example, the costs that would be avoided in the long-run by reducing the maximum line speed on a route section are allocated to fast services that run on that route section.
- 1.13 Vanilla traffic avoidable costs are costs that would be avoided in the long-run by removing traffic in general. For example, at minimal levels of traffic, only a single track would be needed and the cost of parallel tracks would, in the long-run, be avoided. These costs are allocated to services using each route section based on each service's share of the trains running on that route section.
- 1.14 Having identified traffic characteristic avoidable costs and vanilla traffic costs, the new methodology then considers the remaining costs associated with the rail network. These remaining costs are the costs that would be incurred on a "minimal traffic network". A minimal traffic network represents the assets required to facilitate minimum traffic levels (e.g. one train per day) and maintain the current connectivity of the network. Minimal traffic network costs are "non-avoidable" since they would be incurred regardless of changes to the type and volume of traffic that runs on the network.
- 1.15 The new cost allocation methodology allocates these non-avoidable costs (which Network Rail calls "minimum network fixed costs") to operators using two approaches:
- for cost categories where avoidable costs have been identified, an "Equi-Proportional Mark-Up" (EPMU) approach is used to allocate these costs to services. The EPMU approach allocates non-avoidable costs to operators based on each operator's share of total avoidable costs (i.e. the sum of traffic characteristic and vanilla traffic avoidable costs); and

- for cost categories where no avoidable costs have been identified, costs are allocated to operators based on the operator's share of specified traffic metrics (the same metrics as those used as part of the CP5 FTAC allocation methodology for the majority of cost categories).

Allocate regulatory asset base (RAB) return on the basis of asset costs

1.16 Under the new cost allocation methodology, the RAB return is allocated to asset categories on the basis of estimated depreciated replacement cost. The current FTAC methodology allocates the RAB return to asset categories on the basis of the proportion of long-run renewals expenditure each category accounts for²².

Revise the allocation of variable and third party income

1.17 The new Network Rail cost allocation methodology also makes changes to how Network Rail's variable and third party income is allocated to operators. For example, VUC income is allocated to operators based on forecasts of the amount each operator will pay in charges, as opposed to each operator's vehicle miles.

Revised allocations

1.18 The Brockley Consulting report shows how operators' fixed cost allocations would have been different in the final year of CP5, if the new cost allocation methodology had been used to allocate Network Rail's net revenue requirement to all operators.

1.19 Based on analysis undertaken by Network Rail, if the new cost allocation methodology were used to allocate fixed costs to services for CP6, fixed cost allocations would increase in areas of the network that are inherently costly per mile, and for services that use those parts of the network. This includes urban services that run in areas that have a relatively high number of junctions and bridges. The main driver of this result is the geographical disaggregation of the cost base, which allocates the costs of more expensive assets (e.g. relating to bridges) only to the services using those assets, rather than all services using the route, as previously.

1.20 Conversely, fixed cost allocations decrease for services running on areas of the network that are relatively simple, such as inter-city services that tend to run on relatively flat and simple terrain.

1.21 The geographical disaggregation of the cost base in the new cost allocation methodology also increases the allocation for services that run on quieter areas of the network. This is due to the costs in these areas being spread across fewer

²² We note that this methodology could apply in CP6 to Network Rail's forecast financing costs, as ORR has not calculated the RAB return as part of Network Rail's CP6 revenue requirement calculations.

services. The methodology has the opposite impact on the allocation for services running on busier parts of the network.

Network Rail's September 2017 consultation

- 1.22 In September 2017, Network Rail consulted on its new methodology for allocating fixed costs to services²³.
- 1.23 The consultation sought stakeholder views on the proposal to use the new methodology to allocate fixed costs and variable and third party income to operators in CP6, including for the purpose of setting access charges.

Responses to the consultation

- 1.24 As well as responding to Network Rail's consultation, stakeholders also made comments on the new cost allocation methodology in response to our September 2017 consultation on charges recovering fixed network costs²⁴.
- 1.25 The responses to both consultations were generally supportive of allocating Network Rail's fixed costs using an avoidable cost approach. Most stakeholders agreed that this approach would increase the transparency around the drivers of fixed costs, and improve decision making in the rail industry.
- 1.26 However, stakeholders strongly opposed the proposal to allocate non-avoidable costs to services. Respondents explained that operators are unable to influence non-avoidable costs since these costs are not linked to any particular activity on the network and would still be incurred in order to maintain the current condition and connectivity of the network, even if no traffic were running. As a result, allocating non-avoidable costs to services would not provide any benefits in terms of increasing the transparency or knowledge around the drivers of fixed costs.
- 1.27 Stakeholders also raised concerns that the allocation of non-avoidable costs could create the impression that a high proportion of fixed costs could be avoided if certain services stopped running, which would not be the case.

²³ *Network Rail's consultation on its methodology for allocating fixed costs to train operators in Control Period 6 (CP6)*, Network Rail, September 2017. This may be accessed [here](#).

²⁴ *PR18 consultation on charges recovering fixed network costs*, Office of Rail and Road, September 2017. This may be accessed [here](#).

Network Rail's conclusions

- 1.28 Network Rail published its conclusions on the new cost allocation methodology on 4 May 2018²⁵.
- 1.29 In its conclusions document, following consideration of stakeholder feedback to its consultation, Network Rail revised its September 2017 proposal. The revised proposal is to allocate only traffic-related avoidable fixed costs to train operators in CP6. Network Rail proposes that the fixed costs associated with having a minimum network (i.e. non-avoidable costs) are allocated to funders, rather than train operators.

Overview of our June 2018 proposals

- 1.30 We published an impact assessment in draft form alongside our June 2018 consultation²⁶. As part of the impact assessment we considered three options for allocating fixed costs to services in CP6:
- **'Do nothing' option:** Continue to use the existing approaches to allocate fixed costs to services²⁷.
 - **Option 1:** Use the new Network Rail cost allocation methodology (as per Network Rail's September 2017 proposal).
 - **Option 2:** Use the new Network Rail cost allocation methodology, excluding the allocation of non-avoidable costs to services (as per Network Rail's May 2018 proposal).
- 1.31 The draft impact assessment was based on our review of the methodology, and feedback from stakeholders in response to our September 2017 consultation and Network Rail's September 2017 consultation on its new methodology for allocating fixed costs to services.
- 1.32 At the time of publishing the draft impact assessment, the only significant concern stakeholders had raised with the Network Rail cost allocation methodology was the allocation of non-avoidable costs.
- 1.33 In the draft impact assessment we highlighted that, although FTAC recovers a large proportion of Network Rail's costs, the methodology for calculating the charge is

²⁵ *Network Rail's conclusions on its methodology for allocating fixed costs to train operators in Control Period 6 (CP6)*, Network Rail, May 2018. This may be accessed [here](#).

²⁶ *Draft impact assessment on the Network Rail methodology for allocating fixed costs to train operators*, June 2018. This may be accessed [here](#).

²⁷ As stated previously, the FTAC methodology would be used to allocate fixed costs to open access services.

relatively simple and lacks cost reflectivity. Therefore, the main benefit of using the new cost allocation methodology (i.e. options 1 and 2) is that it would improve the information available on the drivers of Network Rail's fixed costs.

- 1.34 The improved information on the drivers of fixed costs could help Network Rail identify ways to lower its fixed costs. For instance, the geographical disaggregation of the cost base would show how fixed costs vary in different areas of the network, allowing Network Rail to focus on areas of the network where long-run cost savings can be made.
- 1.35 This improved information could also be used by the bodies responsible for allocating capacity, such as ORR, funders and Network Rail, to better understand the long-run costs of different services joining the network. The traffic characteristic avoidable cost approach would show the long-run costs associated with adding different types of traffic to the network.
- 1.36 However, as stakeholders highlighted, allocating non-avoidable costs to services would not improve the transparency of the drivers of fixed costs. The routine allocation of these costs to specific services could also lead to misunderstandings about the fixed costs caused by different types of services. As a result, we considered that the information available on the drivers of fixed costs would be most improved under option 2, which does not allocate non-avoidable costs to any particular services.
- 1.37 We noted, however, that there may be times when it is useful to present an allocation of total Network Rail or industry cost, including of non-avoidable costs. This means it would still be useful to have this information available, even if it is not used to determine FTAC or the reported allocation of costs to each operator.
- 1.38 Based on our draft impact assessment, we proposed to use the new cost allocation methodology to allocate fixed costs to services, excluding the elements of the methodology that allocate non-avoidable costs to services (i.e. option 2).

Summary of stakeholder views

- 1.39 The responses to our June 2018 consultation were generally supportive of our proposal to use the new cost allocation methodology to allocate fixed costs to services, excluding the elements of the methodology that allocate non-avoidable costs to services.
- 1.40 Stakeholders agreed with our assessment that using the new cost allocation methodology would improve the cost reflectivity of fixed cost charges and the understanding of the drivers of fixed costs in the rail industry.

1.41 We have updated our impact assessment to reflect the feedback we received from stakeholders in response to our June 2018 consultation²⁸.

Our determination on the approach to allocating fixed costs to services in CP6

1.42 The responses to our June 2018 consultation did not materially alter our assessment of the three options we considered in our impact assessment. As a result, our decision is **to use the new cost allocation methodology to allocate fixed costs to services, excluding the elements of the methodology that allocate non-avoidable costs to services (i.e. option 2).**

1.43 The fixed costs allocated to services under option 2 will be the upper bound for each service's ICC for CP6.

²⁸ *Final impact assessment on Network Rail's cost allocation methodology*, Office of Rail and Road, October 2018. This may be accessed [here](#).

2. Infrastructure cost charges for freight services

Introduction

- 2.1 In CP5, rail freight services carrying one of three commodities (ESI coal, iron ore or spent nuclear fuel) have been subject to ICCs (previously referred to as mark-ups, reflecting the language of the legislation). As part of our 2013 periodic review (PR13) charging review, we applied an MCB test to determine which commodities would pay the FSC and FOL charge in CP5, and the level of these charges.
- 2.2 As part of our PR18 review of charges, we updated the MCB test for freight services, and also considered whether any changes should be made to the current approach to defining freight market segments.
- 2.3 This chapter details:
- our key decisions regarding changes to the existing market segmentation approach;
 - the freight commodities that are in scope for ICCs; and
 - the level of ICCs in CP6.

Policy Development

Overview of September 2017 consultation

- 2.4 In our September 2017 consultation, we set out proposals on the market segmentation for freight services in CP6, and an initial view on which freight market segments appear to be able to bear ICCs.
- 2.5 We proposed to retain the existing approach to market segmentation based on commodities carried and did not propose to define further market segments.
- 2.6 We proposed to allow Network Rail to continue to levy ICCs on freight trains carrying ESI coal, iron ore and spent nuclear fuel. In CP5, freight operators carrying these commodities have been subject to the FSC and FOL charge²⁹. High-level analysis undertaken by our consultants CEPA in 2017 (published alongside our September 2017 consultation³⁰) suggested that these commodities would still be able to bear these charges in CP6.

²⁹ In CP6 these two charges will be merged into one infrastructure cost charge.

³⁰ *PR18 Structure of charges review – Market can bear analysis: Freight services*, Cambridge Economic Policy Associates, September 2017. This may be accessed [here](#).

- 2.7 We also proposed that freight services carrying ESI biomass could bear an ICC in CP6. The CEPA analysis supported this.
- 2.8 Respondents to the September 2017 consultation were largely supportive of retaining the existing freight market segmentation. Most respondents were also not opposed to continuing to levy ICCs at the existing charge level on freight services carrying ESI coal, iron ore and spent nuclear fuel.
- 2.9 However, most freight respondents were not supportive of levying ICCs on freight services carrying ESI biomass in CP6. Therefore, we undertook further analysis to examine the concerns raised.

Further analysis in relation to biomass

- 2.10 In light of responses received from stakeholders around the proposal to allow Network Rail to levy ICCs on freight services carrying ESI biomass in CP6, we undertook further analysis and consideration of relevant evidence.
- 2.11 Having reviewed arguments made in response to our September 2017 consultation, we considered that the economics of biomass generation mean that a change in rail transportation costs is unlikely to significantly affect the overall electricity generated from biomass. This means that biomass shipped would remain largely unchanged. In large part, this reflects the difference in the relative costs of shipping biomass by rail and by road, as explained below. It also reflects how long-term subsidy contracts for biomass generation are structured (providing strong incentives to maximise output). However, we noted that the fact that government directly subsidises biomass generation is not a justification on its own for levying ICCs on biomass.
- 2.12 In light of stakeholder concerns around a potential switch to carrying biomass by road, we appointed MDS Transmodal (MDST) to assess the impact of an increase in access charges on the carriage of biomass by rail, both in terms of the rail routes chosen by companies shipping biomass, as well as the substitutability between rail and road. This analysis is discussed in the following section.
- 2.13 MDST's analysis was carried out on the assumption that any increases in rail access charges would be passed on by train operators to their customers. In light of this assumption, we investigated who would bear an increase in charges, and whether this would be the end customer, or the train operator. Based on the information available, we have a reasonable basis to conclude that increases in charges would be passed on to customers.

Summary of MDST analysis

- 2.14 We commissioned MDST to assess the effect of introducing ICCs (modelled as increases on current access charges, and specifically the VUC) on the carriage of

biomass by rail³¹. MDST investigated to what degree increases in charges would lead to a reduction in the amount of biomass carried by rail by 2023-24.

- 2.15 Drax is the main producer of electricity from biomass in the UK, therefore its business was a key focus in MDST's analysis. Lynemouth power station, expected to become operational in 2018, was also included in the analysis.
- 2.16 MDST's analysis showed that, on a modelled basis, biomass carriage by rail is significantly cheaper than by road. Therefore a change in charges would be unlikely to result in shifting carriage of biomass to power stations by road, all other things being equal. Rather, increased rail charges would affect the mix of ports used in transporting biomass to minimise transportation costs³².
- 2.17 MDST modelled a number of scenarios for increases in track access charges, including a central case estimate of a 100% increase in VUC. Based on the model MDST developed, it estimated that an increase of 100% in charges would result in a 10.2% reduction in rail freight traffic (tonne miles³³) for Drax, and a 0.3% increase in the delivered cost of biomass (assuming no effect on quantity of biomass burned).

Overview of our June 2018 proposals

- 2.18 In our June 2018 consultation, we confirmed our proposals on the market segmentation for freight services in CP6, and confirmed our view on which freight market segments appear to be able to bear ICCs.
- 2.19 We confirmed our proposal to retain the existing approach to market segmentation based on commodities carried and confirmed that we did not propose to define further market segments.
- 2.20 We confirmed our proposal to allow Network Rail to continue to levy ICCs on freight trains carrying ESI coal, iron ore and spent nuclear fuel.

³¹ *The potential impact of increases in track access charges on the transport by rail of biomass*, MDS Transmodal, April 2018. This may be accessed [here](#).

³² Drax currently transports biomass via rail from a range of ports. Any change in the overall costs to a route, including an increase in track access charges, such as the proposed ICC, would likely change this mix. Lynemouth power station is expected to be supplied with biomass from the nearby port of Tyne. There are no other suitable nearby ports through which the power station could import biomass. Because it is a short rail journey between Lynemouth and Tyne, rail charges make up a very small proportion of total costs. Therefore, MDST determined that increases in rail charges would have little effect on delivered costs of biomass for Lynemouth.

³³ MDST's analysis was in thousand gross tonne kilometres. We converted this to gross tonne miles to be consistent with Network Rail's price lists.

- 2.21 We confirmed our proposal that freight services carrying ESI biomass could bear an ICC in CP6. This was supported by the analysis undertaken by ORR and MDST outlined above.
- 2.22 We also proposed draft ICC rates for CP6 for existing commodities that currently face an ICC (ESI coal, iron ore, and nuclear spent fuel), and for ESI biomass.

ICCs for ESI coal, iron ore, and spent nuclear fuel

- 2.23 For existing commodities our proposed ICC rates took into account evidence that suggested the sensitivity to rail charges has not materially changed for commodities currently subject to mark-ups. We saw no strong argument for changing the overall charges that existing commodities face. Reflecting this, we proposed to set ICCs for ESI coal, iron ore and spent nuclear fuel in CP6 to maintain the overall level of total charges in line with the CP5 exit levels for these commodities (on average).
- 2.24 Network Rail's costs related to the maintenance and renewal of the track have increased significantly over CP5. As part of the wider PR18 charges work, the ORR has decided to cap/phase-in the associated increases in the VUC in CP6 for freight and charter operators³⁴.
- 2.25 We considered how the changes to VUC will affect setting ICCs for ESI coal, iron ore and spent nuclear fuel in CP6. For the first two years of CP6, the VUC phasing-in profile means constant ICC rates for these three commodities, in real terms. For the final three years, increases in VUC mean that ICCs for these three commodities should reduce in order to maintain the same overall level of cost recovery (in line with our evidence regarding ability to bear for these commodities)³⁵.
- 2.26 In light of this, we calculated and presented average ICC rates for CP6 for each commodity, taking into account the planned increase in VUC for the last three years of the control period.

ICCs for ESI biomass

- 2.27 We proposed to maintain our overall approach to setting ICCs for freight commodities (i.e. consistent with PR13 and previous periodic reviews). Therefore, we set the charge at a level so as to not exclude a market segment from operating. As per our PR13 approach, we saw this as equivalent to setting an ICC such that there is a less than 10% modelled reduction in the gross tonne miles shipped by rail. We noted that

³⁴ 2018 periodic review final determination: Supplementary document – Charges and incentives: conclusions to consultation on variable usage charge, Office of Rail and Road, October 2018. This may be accessed [here](#).

³⁵ Noting the removal of the capacity charge and the coal spillage charge in CP6.

in the case of biomass, most of the modelled reduction is driven by likely changes in the pattern of rail use, rather than changes in total biomass generation.

2.28 As for other commodities, we took into account changes in the other charges when setting the final ICC, including capping decisions in relation to the VUC, and the removal of the capacity charge.

2.29 For ESI biomass, there was not an ICC in place in CP5. Based on MDST's modelling, and applying a conservative approach, we proposed an ICC rate for ESI biomass equivalent to 75% of the end-CP5 average biomass variable usage charges, less the average capacity charge paid by biomass traffic (expressed as a rate per thousand gross tonne mile). This is consistent with a less than 10% reduction in gross tonne miles for biomass.

Stakeholder responses to June 2018 consultation

2.30 Only a few stakeholders responded to our draft determination ICC proposals for freight. Network Rail remained supportive of our proposal to allow it to levy charges on ESI coal and spent nuclear fuel. It was also supportive of charging iron ore and ESI biomass if we are certain services carrying those commodities can bear the charges.

2.31 ESI biomass stakeholders remained unsupportive of allowing Network Rail to levy charges on freight services carrying ESI biomass. Drax and GB Railfreight reiterated previous arguments made against charging services carrying ESI biomass, including:

- it would increase the costs of biomass which may make it less competitive compared with coal and gas, and also make it more difficult for the industry to remain viable following the removal of renewable support in 2027;
- over time it will result in biomass being 'priced-off' the network; and
- levying a charge is a poor signal to other industries that may want to invest in rail freight infrastructure.

2.32 Drax suggested that the ICC on ESI biomass (should it be introduced) be phased-in similarly to when the FSC was introduced for ESI coal, iron ore and spent nuclear fuel in CP5.

2.33 Network Rail stated that for billing purposes it was planning on assuming all freight services carrying biomass were carrying ESI biomass.

Consideration of stakeholder responses in our final determination

- 2.34 Stakeholders did not present new evidence that countered MDST’s analysis on the biomass industry’s ability to bear an ICC. Rather, most respondents either made high-level comments about analysis or did not address the work done by MDST.
- 2.35 We took into account stakeholder concerns about the potential negative effects stemming from an immediate increase in charges for services carrying ESI biomass. We also had meetings with Drax to discuss its business and the likely impacts.
- 2.36 On balance, we agree with the arguments made for phased-in charges for freight services carrying ESI biomass. The phase-in profile will be the same as that used to phase in the FSC in CP5 (see Table 2.1).

Table 2.1: Phase-in profile for ESI biomass charges in CP6

	2019-20	2020-21	2021-22	2022-23	2023-24
Proportion of ICC paid	0%	0%	20%	60%	100%
ICC (£/kg _{tm})	0.00	0.00	0.29	0.87	1.45

- 2.37 Regarding Network Rail’s billing proposal, from our understanding of the market, all biomass carried on freight rail services is ESI biomass. If this is incorrect, or if non-ESI biomass is being transported via rail freight in future, the freight operating company can request Network Rail to produce a separate charging commodity under which these services will be shipped.

Our determination on freight infrastructure cost charges in CP6

- 2.38 **The existing market segmentation for freight services will be retained, and we will continue to allow Network Rail to levy ICCs/mark-ups on freight trains carrying ESI coal, iron ore, and spent nuclear fuel.**
- 2.39 **We will also allow Network Rail to levy ICCs on freight trains carrying ESI biomass in CP6. We have determined that this charge will be phased in over CP6 according to the profile in Table 2.1.**
- 2.40 Table 2.2 shows our determination of the ICCs for CP6, accurate to the decimal places shown. Network Rail will publish actual charges, to a greater number of decimal places, in its price lists. Network Rail will publish the finalised CP6 price lists on 20 December 2018.

Table 2.2: Our determination of infrastructure cost charges for freight services in CP6

2017-18 prices	2019-20	2020-21	2021-22	2022-23	2023-24
ESI coal	1.6	1.6	1.6	1.6	1.6
Iron ore	1.6	1.6	1.6	1.6	1.6
Spent nuclear fuel	34.2	34.2	34.2	34.2	34.2
ESI biomass	0.0	0.0	0.3	0.9	1.4

Note: charge in £ per thousand gross tonne mile (kgtm). Biomass takes into account phase-in profile.

2.41 The move to CPI for the indexation of track access charges in CP6 is forecast to result in affected charges being inflated by around 1% less per annum than would have been the case under RPI. By the final year of CP6, train operators are forecast to pay nominal rates which will be approximately 5% lower under CPI than RPI. This has not been incorporated into Table 2.2. It is presented in 2017-18 prices.

3. Infrastructure cost charges for passenger services

Introduction

- 3.1 We have previously set out our intention to work towards levying charges to recover fixed network costs from all operators, including OAOs, in CP6. In order to levy such charges, the legislation requires us to assess the ability of different market segments to bear charges above directly incurred costs. We also need to consider how such charges should be levied (i.e. the design of the charges) for both open access and franchised passenger services.
- 3.2 In this chapter, we provide an overview of our policy proposals, feedback received from stakeholders and our determination on:
- (a) **ICCs for open access operators:**
 - (i) market segmentation;
 - (ii) our access policy;
 - (iii) implementation;
 - (iv) charging unit; and
 - (v) level of ICCs in CP6.
 - (b) **ICCs for franchised operators:**
 - (i) market segmentation; and
 - (ii) approach for adjusting ICCs for changes in timetabled traffic.

(a) Open access operators

(i) Passenger market segmentation

Policy development

- 3.3 In our September 2017 consultation, we set out initial proposals around a potential approach to defining passenger market segments, for the purpose of levying ICCs. This was based on analysis undertaken by consultants CEPA and Systra³⁶.
- 3.4 For an outline of the work undertaken by CEPA and Systra on passenger market segmentation, see Annex A.
- 3.5 In response to our September 2017 consultation, including the technical analysis by our consultants, stakeholders outlined a number of concerns and suggestions in relation to the market segmentation for passenger services. These included that:
- respondents were concerned that the consultants' analysis was not consistent with the legislative requirement that market segments be based on characteristics of services, rather than just on revenues and costs;
 - respondents agreed that distinguishing between franchised and open access services (two market segments) was not enough. Several suggested that open access services should be split into several market segments, based on their different characteristics; and
 - some respondents suggested that a more granular approach should be employed in the analysis to pinpoint which journeys attract the highest revenue (noting distinction between train service and journey) – possibly going below service code level. In terms of granularity, some stakeholders also thought it was essential for the analysis to distinguish between peak and off-peak services (or time of day).
- 3.6 Stakeholders also wanted more clarity around any proposed transitional arrangements. Some respondents were particularly concerned about how these would affect existing and new entrant OAOs.
- 3.7 Respondents agreed that we should clarify the planned changes to the access policy in response to the introduction of ICCs for open access services. They emphasised that the charging and access policy elements should be considered holistically.

³⁶ *PR18 Structure of charges review – Market can bear analysis: Passenger services*, Cambridge Economic Policy Associates & Systra, September 2017. This may be accessed [here](#).

Overview of June 2018 proposals

3.8 In our June 2018 consultation, we considered stakeholder responses alongside CEPA and Systra's analysis, and the legislative requirements. In light of this information, we considered two options for defining sub-segments for open access services:

- **Option 1** – define three market segments: intercity; long-distance commuter; and other. The granularity of these market segments should allow for more accurate charging (particularly in the long-term); and
- **Option 2** – define two market segments: interurban and other.

3.9 Analysis and practical evidence suggests that the boundary between intercity and long-distance commuter services is not always very precise. As such, option 2 has the advantage that it does not require arbitrary boundaries to be drawn between these two kinds of services, when defining which services belong to which segment. In addition, the segmentation proposal under option 2 is consistent with one of the pairs set out in paragraph 2(10) of Schedule 3 of the 2016 Regulations, namely 'urban or regional versus interurban passenger services'³⁷.

3.10 The CEPA and Systra analysis did not produce different estimates of ability to bear for intercity and long-distance commuter services. This means that in the short-term implementing option 2 will not result in less accurate charging compared with option 1. In the future, as more information and data becomes available, we could possibly distinguish between intercity and long-distance commuter services as part of our definition of market segments for open access services.

3.11 On balance, and in light of the arguments set out above, we proposed to define two market segments for open access services in CP6: interurban and other³⁸.

3.12 We also finalised our proposal to not undertake any further work as part of PR18 to quantify ability to bear for the following market segments:

- peak and off-peak services (i.e. segmented by time of day);
- domestic versus international services³⁹; and

³⁷ Given we are proposing to set the charge for services which are not interurban services to zero in CP6, we are proposing to simply call the market segment of urban or regional services as 'other'.

³⁸ We note that service codes are the lowest level at which Network Rail can bill passenger operators. As such, we will define service codes (rather than individual services) as belonging to a particular market segment.

³⁹ From the list of pairs in paragraph 2(10) of Schedule 3 of the 2016 Regulations. Annex VI in the 2012/34 Directive.

- regular versus occasional train services⁴⁰.

- 3.13 As explained in Annex A, the time of day when services run is an important determinant of demand. As stakeholders outlined in their responses to the September 2017 consultation, distinguishing between peak and off-peak services could allow for a market segmentation to be developed that more accurately reflects how demand varies across different types of services. However, as discussed in Annex A, the lowest level of disaggregation available for industry data is the service code. Service codes do not generally distinguish between peak and off-peak services. Should industry data systems become more refined in the future (or should data on peak and off-peak services become available from another source), we could seek to reflect this dimension as part of the market segmentation.
- 3.14 The market segmentation proposed in our June 2018 consultation for open access services relates directly to one of the pairs listed in paragraph 2(10) of Schedule 3 of the 2016 Regulations. Our consultants also considered the relevance of the two other pairs identified. We set out our emerging views in relation to each of these in our September 2017 consultation.
- 3.15 With respect to the domestic versus international services pair, international services mostly run on the HS1 network (and make very limited use of Network Rail's infrastructure). The consultants did not recommend considering the ability to pay of these types of services further as part of the MCB analysis.
- 3.16 Similarly, with respect to the potential to distinguish between regular and occasional services, charter services currently represent a very small proportion of total passenger (franchised and OAO) traffic – i.e. less than 0.2% of mileage. In addition, these services tend to vary significantly in terms of where and when they run. The costs and revenues of these services are not captured in industry databases, and therefore investigating ability to bear for the market segment as a whole would be a very complex exercise.

(ii) Infrastructure cost charges and our access policy

Overview of June 2018 proposals

- 3.17 In our June 2018 consultation we confirmed that a key driver of our reforms to access charges for passenger services has been facilitating more competition in the provision of these services (on-rail competition). This builds on the recommendations of the Competition and Markets Authority⁴¹.

⁴⁰ From the list of pairs in paragraph 2(10) of Schedule 3 of the 2016 Regulations. Annex VI in the 2012/34 Directive.

⁴¹ *Competition in passenger rail services in Great Britain: A policy document*, Competition & Markets Authority, March 2016. This may be accessed [here](#).

- 3.18 In CP5, OAOs have not been subject to access charges that recover Network Rail's fixed costs. In addition, we currently use the 'not primarily abstractive' (NPA) test when approving access rights to both OAOs and franchise services, which looks at how much of the forecast income for the proposed services is newly generated versus income abstracted from other existing services.
- 3.19 As also outlined in previous consultations, we confirmed that should we conclude to levy ICCs on OAOs in CP6, we will need to revisit our access policy (including the NPA test), to determine what changes might be needed.
- 3.20 In April 2018, we published a letter updating industry on our review of charges and incentives⁴². In this letter, we outlined that the passenger MCB analysis supporting our September 2017 consultation produced estimates that would inform the level of ICCs that different passenger market segments could bear. However, there is a high degree of averaging in the analysis (due to the available data and tools). As such, our consultants produced conservative estimates of ability to bear, which implies that charges based on this analysis would be somewhat conservative for any market segment deemed to be able to bear ICCs.
- 3.21 In April 2018, the Department for Transport (DfT) also published its response to its February 2017 consultation on the passenger rail public service obligation (PSO) levy. We are continuing to work with DfT on this issue. However, it appears unlikely that a levy will be introduced in the short-term.
- 3.22 In light of the issues highlighted around the likely scale of ICCs, and the lack of a PSO levy, we suggested that our charging reforms will only support very limited changes to our access policy (and only limited amendments to the NPA test).

(iii) Arrangements for existing and new open access services

Overview of June 2018 proposals

- 3.23 In our June 2018 consultation, we considered how to balance the objective of facilitating more new entry in CP6, while having regard to the position of OAOs already operating in the market. We specifically considered what kind of arrangements we should put in place for existing and potential new entrant OAOs in CP6.

⁴² *Charges and contractual incentives – PR18 update*, Office of Rail and Road, April 2018. This may be accessed [here](#).

Existing open access operators

3.24 For existing OAOs, we proposed to provide relief from any increase in charges prompted by the introduction of ICCs for the whole of CP6. This is to protect the existing level of competition provided by these services.

3.25 This was supported by:

- OAOs currently operating services were granted access based on our previous access policy which restricted OAO's use of the network; and
- CEPA and Systra analysis of services showed that existing OAOs have low net operating profit. Therefore these services are unlikely to be able to bear increased charges.

3.26 We defined existing OAOs as operators of services who had access agreements approved before we set out our intention to review the charges levied on OAOs as part of PR18. We formally set out this intention in our letter responding to the Competition and Market Authority Report on on-rail competition published on 26 November 2015⁴³ and our consultation on network charges published on 10 December 2015⁴⁴. For the avoidance of doubt, both the open access application we approved from First Rail to run services between London and Edinburgh and the approved application from Great North Western Railway (GNWR) to run services between London and Blackpool fall after these dates and consequently these will be treated as new services for charging purposes.

3.27 If existing OAOs continue to operate their current services, they would not see an increase in charges because of the introduction of the ICCs over CP6. More generally, these open-access operators are not likely to see a significant change in their variable charges over CP6, as the increase in variable usage charge is largely offset by the removal of the capacity charge.

3.28 If existing OAOs propose significant variations to their services and that service falls within the interurban market segment, it will be subject to an ICC. Before the beginning of CP6, we will consult and conclude on updates to our access policy. Applications for modified access rights will be assessed against this policy when it is in place. We are working with operators with ongoing applications to agree a practical way to assess their applications against the current access policy, while giving appropriate consideration to any ICC income that they would generate for Network Rail.

⁴³ *Letter to CMA: Competition in Passenger Rail Services in Great Britain*, Office of Rail and Road, November 2015. This may be accessed [here](#).

⁴⁴ *Network Charges: A consultation on how charges can improve efficiency*, Office of Rail and Road, December 2015. This may be accessed [here](#).

- 3.29 Unlike new entrant OAOs, we proposed that relevant services from existing OAOs will be subject to the full charge from year one of their modified operation. This is consistent with our reasoning outlined in the next section discussing relief for new entrant OAOs. As existing OAOs already have established operations, they are likely to face fewer risks than new entrants, as they are likely to be adding new services to their existing operations. Reflecting this, where such additional services are introduced by existing OAOs, they will be in scope for an ICC. If the service falls within the interurban market segment, it would not benefit from phasing in of the charge.
- 3.30 New entrants typically require time to build up their business. This involves promoting and marketing services to reach target load factors. This can take several years. We recognise that new entrants generally do not expect to be very profitable in the early years of operation. This implies that the risks faced by these new entrants are significantly higher than those facing existing operators (both existing open-access and all franchise operators).
- 3.31 In light of this, we proposed to phase in ICCs on interurban services run by new entrant OAOs. The phase-in profile would see no ICC levied in the first two years of operation, 25% of the ICC in year three, 50% in year four and 100% in year five. The phasing-in refers to when a new entrant starts operating services, rather than the specific year of the control period when the operator starts operating services, or when the operator's rights have been approved.
- 3.32 In terms of a practical definition of a new entrant, we defined a new entrant OAO in a consistent way to how it was defined in the transitional arrangements for the capacity charge in PR13. See Annex B for the definition. We discussed above (paragraph 3.26) the definition of existing and new operators for those operators who submitted applications prior to the final determination.
- 3.33 As discussed previously in this chapter, the NPA test will take into account potential ICC charges when a new entrant OAO applies for access.

(iv) Charging unit for open access operators

Policy development

- 3.34 As part of the September 2017 consultation we proposed to levy ICCs on open access services as a rate per train mile.
- 3.35 The initial proposal in September 2017 to levy ICCs on open access services as a unit of traffic, rather than a lump-sum charge fixed for the control period, was based on OAOs' ability to enter and exit the market more easily than franchised passenger operators.

3.36 In terms of the specific unit of traffic to use we considered three options, namely as a rate per: train mile; vehicle mile; or passenger kilometre.

3.37 We proposed a rate per train mile due to: the signals it would send to operators about making efficient use of capacity on the network; the evidence on the link between train miles and long-run fixed costs on the network; and the ability for Network Rail to easily bill operators using this unit of traffic.

Overview of June 2018 proposal

3.38 As the responses to the September 2017 consultation generally supported this proposal, we continued to propose to levy ICCs on open access services as a rate per train mile in the June 2018 consultation.

3.39 In June 2018, we updated the draft impact assessment on the specific unit of traffic to use⁴⁵.

(v) Level of infrastructure cost charges for open access services in CP6

3.40 In our June 2018 consultation, we proposed to set the ICC for open access services in the interurban market segment in CP6 at £4 per train mile.

3.41 This was supported by our assessment of:

- the level of charges those services can bear (informed by CEPA and Systra's analysis); and
- the draft level of all other charges in CP6 (as at June 2018).

3.42 The second stage of CEPA and Systra's analysis looked in more detail at some of the services that were identified in the first stage of the analysis as having a high net operating profit. The analysis sought to model the maximum level of charge that could be levied without deterring an unconstrained operator from operating a service. This was measured as the difference between the surplus earned by an unconstrained operator for its worst performing train 'diagram' (the full set of movements of a train during the day), and the average surplus earned by existing OAOs. A more detailed explanation of the approach used is set out in the CEPA and Systra report.

3.43 All the assumptions used in the modelling sought to produce a conservative estimate of a charge an interurban open access service could bear. While some of the services the consultants examined had substantially higher surplus values, the

⁴⁵ *Final impact assessment of units of traffic for levying ICCs on OAOs*, Office of Rail and Road, June 2018. This may be accessed [here](#).

results from the case studies indicated a minimum range of £6 to £7 per train mile for an ICC for intercity and long-distance commuter services, less the average CP5 capacity charge. The baseline for the analysis (against which increases were modelled) was CP5 charge levels, excluding the capacity charge.

3.44 This approach effectively provided us with a conservative upper limit for any ICCs for new entrant OAOs in CP6⁴⁶. Given that this is a new approach, and it is the first time we have undertaken this type of analysis, we believed that an overall conservative approach for setting ICCs was appropriate.

3.45 Our proposed rate took into consideration: the draft VUC rates available as at June 2018; the understanding that the consultant's proposed minimum rate already took into account the removal of the capacity charge; and that increases in VUC for open access services would be broadly offset by the removal of the capacity charge.

Summary of stakeholder views

3.46 We set out below a high-level summary of stakeholder responses. Our responses document⁴⁷ contains more detailed responses to issues raised by stakeholders in response to the June 2018 ICC consultation.

3.47 Respondents remained supportive of the market segmentation for open access services. Several respondents also expressed their support for levying ICCs on new interurban open access services alongside a revised access policy.

3.48 However, stakeholders were concerned about the lack of detail we had released about: the interurban market segment; what constitutes a significant variation of rights for an existing operator; and changes to the access policy (including changes to the NPA test).

3.49 Respondents were mixed in their support for our proposed level of the ICC for new interurban open access services. However, meetings with some stakeholders indicated that the practicalities of the application of the charge were not widely understood.

3.50 First Rail's London to Edinburgh service and GNWR's London to Blackpool service had access applications approved since we set out our intention to review charging for open access services in late 2015. There was concern from several respondents about how these services would be treated in the new charging regime.

⁴⁶ Taking into account that the analysis excluded the capacity charge.

⁴⁷ *PR18 final determination: Consultation on the draft determination – Summary of comments and our response*. Office of Rail and Road, October 2018. This may be accessed [here](#).

3.51 In the following sections we outline our final policies on market segmentation for passenger services, and implementation of ICCs for existing and new entrant OAOs. This includes how we address the points raised by stakeholders in response to our consultation.

Charging a new open access service operating over both market segments

3.52 Stakeholders were concerned that levying a charge on new interurban open access services would discourage operators from extending into new markets (potentially in the other market segment) should part of the service fall within the interurban market segment.

3.53 Therefore, for clarity, we set out below how we will determine charges for services that do not fall solely within either the interurban or other market segments.

3.54 We expect the ICC only to apply to the part of a service that falls within an interurban market. In practice, this will involve:

- identifying whether the service stops at two or more stations that fall within the interurban segment definition (i.e. if the service falls wholly or partly within the interurban market segment);
- calculating the distance (in train miles) between the two stations that fall within the interurban definition that are the furthest apart; and
- applying the £4 per train mile charge only to that mileage.

3.55 The practical effect of this is that:

- services only stopping at one station defined as part of the interurban market segment (defined here as interurban stations) would not attract an ICC;
- services that do not start and finish at interurban stations, but stop at interurban stations during the journey, would likely attract the ICC only on the part of the service operating between the (two most distant) stations that fall within the interurban market segment; and
- a service that starts and finishes at interurban stations will likely have the charge levied for the whole service, even if it stops at several rural or suburban stations along the way.

3.56 We are levying the charge in this manner to:

- establish a consistent charging treatment between services that just operate in the interurban segment or just in the other segment;

- reduce any disincentives on operators to extend services beyond an urban area (in scope for the charge) to a destination outside the interurban definition; and
- limit perverse incentive not to stop at intermediate points between two interurban stations.

3.57 We are also mindful of the need to avoid unnecessary complexity in the charging approach.

3.58 For Network Rail's charging system, the rate cannot be levied just on a subset of the miles a service travels. Therefore, for a relevant open access service, the ICC will be calculated as an average rate. The rate will take into account the proportion of the service within the interurban market segment, and the proportion in the other market segment. For example, for a 200 mile journey, if 100 miles falls into the interurban market segment, and the remaining 100 miles is in the other segment, then the overall charge for the service will be £2 per train mile. See Annex C for several worked examples.

Level of ICC

3.59 As outlined in the June 2018 consultation, we took into account all charges when determining the level of the ICC. In light of this, between the draft determination and the final determination, we re-examined the proposed ICC rate taking into account changes to other charges.

3.60 As outlined in the VUC conclusions document, the VUC for open access operators increased by an average of 38%. However, taking into account the removal of the capacity charge meant variable charges will not materially increase between the end of CP5 and the beginning of CP6.

3.61 When re-examining the ICC for new interurban OAOs, we took into account the adjustment to the indexation from RPI to CPI. We also analysed the effect of the final efficiency overlay.

3.62 After examining these factors as a whole, we determined that the ICC level proposed in the June 2018 consultation was still appropriate. We note that we had already set the proposed ICC below the estimates of minimum ability to bear.

3.63 We will set the ICC for new interurban open access services at £4 per train mile.

Treatment of recently approved open access services

3.64 When First Rail's London to Edinburgh service and GNWR's London to Blackpool service had their applications approved, we set out that neither operator should take

any comfort that they would benefit from relief from changes to the charging regime⁴⁸.

3.65 We had a meeting to discuss GNWR’s concerns about the policy. The company was mainly concerned with the lack of specific details we had released as at June 2018.

3.66 We considered the arguments put forward by First Rail in response to the June 2018 consultation, and also met with the operator. We summarise the key points made by First Rail and our responses in Table 3.1.

Table 3.1: Outline of First Rail’s concerns and ORR’s response

First Rail’s concern	ORR response
<p>Applying an ICC to its service meant the service would experience “the worst of both worlds” as it was approved under the previous charging regime, but would face an ICC.</p>	<p>We acknowledge this issue for both services, but note that we made clear at the time of awarding the rights that the company could face the new charges.</p> <p>More generally, and in common with all operators, they will be able to apply for additional rights, and the ORR’s access policy will take into account their contribution to fixed costs on the railway through the ICC.</p>
<p>The date distinguishing between whether an operator is new or existing should be when its application was submitted, not when its application was approved.</p>	<p>We think it is more relevant to consider when operators take significant commercial decisions. This would be after the application is awarded. As outlined above, both operators were informed of the potential changes to the charging regime and we have taken steps to ensure that the major commercial costs (notably of committing to a rolling stock lease or order) can be made after there is greater clarity about the level of charge for each service.</p>
<p>First Rail’s London to Edinburgh service had the characteristics of a regional service.</p>	<p>As outlined above, a service that starts and finishes at interurban stations will be considered an interurban service. We consider that both London and Edinburgh will be within the definition for interurban and therefore the charge would apply to the whole service.</p>

⁴⁸ *Decision letter: Applications for access to the East Coast Main Line (ECML)*, Office of Rail and Road, 12 May 2016. This may be accessed [here](#).

Decision letter: Application for a new track access contract for services between London Euston and Blackpool North, Office of Rail and Road, 7 June 2018. This may be accessed [here](#).

ORR did not take into account the changes in other charges when determining the £4 per train mile level of the ICC.

We looked at the changes to charges as a whole when determining the level of the ICC. See Chapter 3 of our responses document⁴⁹ for further details.

3.67 Noting this, both operators will be considered new and in scope for ICCs should the service fall within the interurban market segment.

3.68 However, we emphasise that these operators would be able to apply for rights through the ORR's access policy, which will take into account their contribution to fixed costs on the railway.

Implementation of ICCs on new open access operators

3.69 A number of stakeholders sought more information about:

- the definitions of interurban and the characteristics of a significant variation to an existing service;
- the changes to the access policy, including potential changes to the NPA test; and
- the effect of the economic equilibrium test (to be introduced in early 2019).

3.70 We will be consulting on implementation issues for levying an ICC on new interurban open access services towards the end of 2018. For more details on our next steps for the ICC, see the overview document⁵⁰.

Our determination on open access operator infrastructure cost charges in CP6

3.71 We will define two market segments for open access services in CP6: interurban and other. We will levy the ICC on interurban services. We will consult on the definition of the characteristics of services that fall into each market segment towards the end of 2018.

3.72 We will provide relief to existing OAOs from any increases in charges prompted by the introduction of the ICCs for the whole of CP6. This relief would not be granted if an existing OAO were to significantly vary its service. How significant variation is defined will be consulted on before the end of 2018.

⁴⁹ *PR18 final determination: Consultation on the draft determination – Summary of comments and our response.* Office of Rail and Road, October 2018. This may be accessed [here](#).

⁵⁰ *2018 periodic review final determination: Overview of approach and decisions,* Office of Rail and Road, October 2018. This may be accessed [here](#).

3.73 We will phase in ICCs for interurban new entrant OAO services per Table 3.2.

See Annex B for the definition for a new entrant OAO.

Table 3.2: Transitional arrangements for new entrants operating in an interurban market segment

Year of operation of new entrant	Year 1	Year 2	Year 3	Year 4	Year 5
% of ICC set at periodic review prior to start of operation	0%	0%	25%	50%	100%

Note: ICC will depend on the proportion of the service that operates in the interurban market segment as outlined previously in this chapter.

3.74 We will levy ICCs on OAOs as a rate per train mile.

3.75 We will set the ICC for open access services or parts of services that are categorised as part of the interurban market segment in CP6 at £4 per train mile.

(b) Franchised passenger operators

(i) Market segmentation for franchise passenger operators

Policy development

3.76 In the initial stages of work around market segmentation, we considered the two high-level segments identified in the legislation, and the merits of defining further sub-segments under each of these segments. For the high-level segment of “services within the framework of a public service contract”, we considered defining the same sub-segments as we have determined for open access services.

3.77 This exercise would be very complex, and there would be few benefits in undertaking it. This is because our approach to assessing franchised passenger operators’ ability to bear would continue to be at the train operator level, and based on the existing approach to franchising.

June 2018 proposals

3.78 As such, our final proposal in June 2018 was not to define further sub-segments under the high-level market segment of “services within the framework of a public service contract”.

(ii) Approach for levying infrastructure cost charges on franchised passenger operators

Policy development

3.79 In September 2017, we proposed to adjust franchised passenger operators’ ICCs for changes in timetabled traffic on an annual basis.

3.80 Under this proposal, franchised passenger operators would pay a lump sum ICC (which will continue to be known as FTAC) based on forecasts of their traffic levels for each year of the control period. However, unlike the current FTAC approach, each operator’s charge would be re-calculated at the end of each year of the control period, to reflect the difference between their forecast timetable traffic, and services included in the timetable for each year.

3.81 We made this proposal for two main reasons. Firstly, compared to the current FTAC, this approach would increase the revenue Network Rail receives when new (franchised) services join the network during a control period. As a result, Network Rail would have a stronger financial incentive to add traffic to the network during a control period. This is an important consideration given the decisions to

remove the capacity charge and the financial aspect of the volume incentive for CP6⁵¹.

- 3.82 Secondly, although franchised passenger operators would be held neutral through their franchise agreements to changes in their ICCs for the baseline level of services in their franchise agreements, they would pay additional charges (in addition to short-run variable charges) for services they add to the timetable during the control period. This would provide franchised passenger operators with an incentive to consider the long-run fixed costs caused by adding new services to the network.
- 3.83 We proposed to reflect changes in timetabled traffic, as opposed to changes in actual traffic, in order to mitigate the risk of Network Rail facing a revenue shortfall within a control period when operators run fewer services than they have planned to, due to, for example, the cancellation of services as a result of severe weather. It also prevents a potential unintended consequence that franchise operators might seek to cancel trains to reduce their FTAC charge.

Overview of June 2018 proposal

- 3.84 The responses to our September 2017 consultation were generally supportive of annually adjusting franchised passenger operators' ICCs to reflect annual changes in timetabled traffic, therefore we continued to propose this in our June 2018 consultation.
- 3.85 To take this proposal forward we considered a number of aspects of the proposal in more detail. Below sets out the areas we considered and our proposals in each area.

Traffic metric for annually adjusting franchised passenger operators' ICCs

- 3.86 We considered three units of traffic for the annual adjustment to franchised passenger operators' ICCs: actual passenger kilometres; timetabled vehicle miles; and timetabled train miles.
- 3.87 Our assessment of these three units of traffic identified that timetabled train miles would provide the most stability in ensuring Network Rail is able to recover its total costs.
- 3.88 In addition, the analysis as part of Network Rail's new fixed cost allocation methodology showed that one of the main drivers of fixed costs on the rail network is the additional infrastructure required to accommodate a greater number of services. Adjusting franchised passenger operators' ICCs for changes in timetabled train miles would mean franchised passenger operators would pay for each additional train added to the timetable. Therefore, compared to actual passenger kilometres and

⁵¹ *Letter to Network Rail: Volume incentive – conclusions to working paper*, Office of Rail and Road, May 2018. This may be accessed [here](#).

timetabled vehicle miles, timetabled train miles would most closely reflect one of the key drivers of the fixed network costs.

3.89 Based on this assessment, we proposed to annually adjust franchised passenger operators' ICCs for changes in timetabled train miles.

Level of disaggregation at which the annual adjustment is applied

3.90 We considered annually adjusting franchised passenger operators' ICCs at the operator or service group level.

3.91 Although we considered that adjusting franchised passenger operators' ICCs at the service group level may better reflect the fixed costs imposed by running an additional service, our view was that this benefit would be outweighed by the additional complexity to calculate the adjustment at this level.

3.92 As a result, we proposed to annually adjust franchised passenger operators' ICCs at an operator level.

Basis for the annual adjustment

3.93 In this area, we considered two options: a proportional adjustment of the lump-sum ICC amount; and an ICC unit rate for each franchised passenger operator.

3.94 Under the option of a proportional adjustment of the lump-sum ICC amount, the adjustment would be calculated as the percentage change in timetabled traffic applied to the lump-sum ICC amount set out in the price list. A payment would then be made between Network Rail and train operators following the end of each financial year.

3.95 The ICC unit rate option would calculate an ICC unit rate for each franchised passenger operator as the lump-sum ICC amount for each operator in each year divided by expected traffic for each operator in each year. The ICC adjustment would then be calculated as the difference between the traffic included in the timetable for that year and the baseline timetabled traffic for that year, multiplied by the unit rate.

3.96 Our assessment of these options did not identify either as significantly better than the other. However a proportional adjustment of the lump-sum ICC amount was considered simpler as it avoided the need to apportion the ICC to the operator's forecast train miles to be run. Therefore, we proposed a proportional adjustment to franchised passenger operators' lump-sum ICC amount.

Limiting Network Rail's downside risk

3.97 In response to the September 2017 consultation, several stakeholders raised concerns that a decrease in timetabled traffic within the control period could result in a funding shortfall for Network Rail. Although we consider the likelihood of a

decrease in franchised passenger traffic to be low under the current franchising model, we are aware that this model could change or franchise agreements could be renegotiated during CP6.

3.98 To address this concern we considered two options to limit Network Rail's downside revenue risk: set a floor on reductions in timetabled traffic reflected in franchised passenger operators' ICC adjustment; and apply no adjustment to franchised passenger operator's ICCs for reductions in timetabled traffic.

3.99 Although a floor on the reductions in timetabled traffic reflected in franchised passenger operators' ICCs adjustment would still expose Network Rail to financial risk for decreases in franchised passenger operators' timetabled traffic, it would provide certainty about the maximum amount franchised passenger operators' ICCs could decrease over the control period.

3.100 Also compared to not adjusting franchised passenger operators' ICCs for any reductions in timetabled traffic a floor would still provide franchised passenger operators with an incentive to consider removing services that do not maximise the value of capacity.

3.101 Reflecting this, we proposed to set a floor on reductions in timetabled traffic reflected in franchised passenger operators' ICCs adjustment, specifically a cumulative floor of 5% over the control period. In the July 2018 consultation "Implementing PR18: consultation on changes to access contracts"⁵², we explained we intended to implement the 5% floor as a floor of 1% per annum.

3.102 Under our proposal, the maximum a franchised passenger operator's ICC could decrease for reductions in timetabled traffic in any year would be 1%, equivalent to 5% for the whole control period. For example, in a situation where a franchised passenger operator's timetabled traffic in any year was 3% below their forecast level of timetabled traffic, their ICC for that year would only decrease by 1%.

3.103 We proposed a cumulative floor of 5% over the control period to ensure that, even if the franchised passenger operators' timetabled traffic decreased by the maximum amount, the decrease in Network Rail's revenue would not significantly impact its ability to maintain and renew the network.

Summary of stakeholder views

3.104 Stakeholders continued to express support for the proposal to annually adjust franchised passenger operators' ICCs for changes in timetabled traffic, on the basis

⁵² *Implementing PR18: consultation on changes to access contracts*, Office of Rail and Road, July 2018. This may be accessed [here](#).

that it would provide Network Rail with incentives to grow traffic on the network and encourage the effective use of capacity.

- 3.105 In its response to the June 2018 consultation and in discussions with us following the consultation, Network Rail has considered the approach to setting timetabled traffic baselines for each franchised passenger operator.
- 3.106 Network Rail has proposed to use timetabled train miles from its Schedule 4 Compensation System (S4CS) for a base year, either 2018/19 or 2019/20, and apply its traffic growth forecasts for each year of the control period. Due to the issues with the implementation of the May 2018 timetable using 2018/19 as the base year risks setting baselines that overstate each franchised operators' expected timetabled traffic in CP6. As a result, Network Rail's preferred option is to use 2019/20 as the base year to reduce the financial risk to Network Rail and operators.
- 3.107 Network Rail have explained that due to the process for developing the timetable, using 2019/20 will mean the baselines would not be set before the start of CP6, they would likely be set in July 2019.
- 3.108 On the other aspects of the design of franchised passenger operators' ICCs, the most significant comments raised related to our proposal to set a floor on reductions in timetabled traffic reflected in franchised passenger operators' ICC adjustment.
- 3.109 Network Rail noted our estimate in the June 2018 consultation of the level of financial risk it would be exposed to under a cumulative floor of 5% over CP6 was incorrect. In the June 2018 consultation, we estimated that a 5% decrease in franchised passenger operators' timetabled traffic over CP6 would decrease Network Rail's overall income by £280m over CP6.
- 3.110 Although several stakeholders supported our proposal to limit Network Rail's downside risk by applying a floor on reductions in timetabled traffic reflected in franchised passenger operators' ICC adjustment, three passenger operators explicitly opposed it. One of the main reason the operators gave for their opposition was that it would limit the incentive on Network Rail to grow traffic on the network.
- 3.111 We have updated the draft impact assessment published alongside the consultation in June 2018 to reflect additional evidence we received from stakeholders⁵³.

⁵³ *Final impact assessment on the design of franchised passenger operators' infrastructure cost charges* Office of Rail and Road, October 2018. This may be accessed [here](#).

Consideration of stakeholder responses in our final determination

- 3.112 We have considered Network Rail's proposed approach for setting timetabled traffic baselines. We recognise that using 2019/20 as the base year and consequently setting the baselines after the start of CP6 may have some impact on the incentives the annual adjustment provides to Network Rail and operators to add traffic to the network in the first year of the control period. However, as it would minimise the risk of setting unrealistic timetabled traffic baselines we consider using 2019/20 to be the more appropriate base year to use.
- 3.113 We are continuing to work with Network Rail on the approach for setting timetabled traffic baselines. When we have been assured Network Rail's proposed approach is robust and have confirmed which base year will be used, franchised passenger operators will be consulted on their timetabled traffic baselines for CP6. The exact timing of this consultation is still to be confirmed, However, if Network Rail's proposed approach is proven robust and 2019/20 is used as the base year, we expect it to be in Spring 2019.
- 3.114 We have re-visited our estimate of the financial risk Network Rail would be exposed to under a cumulative floor of 5% over the control period. Based on Network Rail's draft ICC price list for franchised passenger operators⁵⁴ a 5% decrease in franchised passenger operators' timetabled traffic would decrease Network Rail's overall FTAC income by approximately £50m over CP6.
- 3.115 We have updated this in our impact assessment and it has not had a material impact on our assessment of setting a cumulative floor of 5%. In addition, Network Rail considers this level of financial risk to be more reasonable than the £280m we estimated in the June 2018 consultation.
- 3.116 We recognise that limiting Network Rail's downside could limit its incentives to grow traffic. However, this would only apply in certain circumstances; namely where there has already been a significant reduction in traffic volumes from franchise operators. We do not consider this to be a particularly likely scenario, as the minimum service frequencies are typically specified in the franchise contracts. We also see benefit in limiting Network Rail's exposure, so that a higher proportion of its fixed funding does not need to be held as funds to manage risk.
- 3.117 More generally, the evidence and arguments put forward in the consultation have not significantly affected the balance of arguments we put forward in our draft proposals. Our proposals, therefore, remain unchanged.

⁵⁴ CP6 Fixed Charges price list, Network Rail, August 2018. This may be accessed [here](#).

Our determination on franchise passenger operator infrastructure cost charges in CP6

- 3.118 We will **not define further sub-segments under the high-level market segment of “services within the framework of a public service contract”**.
- 3.119 Franchised passenger operators’ ICCs will be **annually adjusted for changes in timetabled traffic**. This determination is subject to further discussions with Network Rail to confirm the approaches for measuring timetabled traffic and setting franchised passenger operators’ timetabled traffic baselines are robust.
- 3.120 In terms of the more detailed design of franchised passenger operators’ ICCs our conclusions are:
- **Annually adjust franchised passenger operators’ ICCs based on variations in timetabled train miles.**
 - **Apply the annual adjustment to franchised passenger operators’ ICCs at the operator level (rather than at a lower level, e.g. the service group).**
 - **Annually adjust franchised passenger operators’ ICCs by the percentage change in their annual timetabled traffic.**
 - **Set a cumulative floor of 5% across the control period (1% per annum) for the percentage decrease in a franchised passenger operator timetabled traffic that is reflected in its ICC adjustment.**

Annex A: Summary of CEPA and Systra's analysis of market segmentation for passenger services

1. In defining market segments, the legislation requires us at a high level to consider two types of passenger services: passenger services within the framework of a public service contract (i.e. a franchise agreement or management contract), and other passenger services⁵⁵.
2. We had not previously undertaken a market segmentation exercise for passenger services. The FTAC franchised operators pay is based on an implicit MCB assessment. This takes into account the fact that operators bid for franchises based on a known level of FTAC at the time when they enter into the franchise. It also takes into account the fact that franchised passenger operators are generally held harmless to any subsequent changes in the level of FTAC resulting from ORR's periodic review⁵⁶.
3. In order to develop a market segmentation for passenger services, CEPA and Systra began by looking at the characteristics of passenger services that impact demand (in a general sense), and therefore the costs and revenues associated with different types of services, as well as requirements for service quality. This was in order to establish which characteristics of services are most relevant when defining market segments. This is similar to the exercise we previously undertook for freight services, for which we determined in previous control periods that the key characteristic determining demand is the commodity carried. The commodity carried impacts the costs of providing the service, the revenues (through the prices customers are willing to pay) and the requirements for service quality (for example journey time expected by the customer, or rolling stock used).
4. The consultants considered a range of passenger service characteristics, as set out in the CEPA and Systra report. Based on their high-level analysis, they concluded that geography, time of day and journey purpose are likely to be the key determinants of demand for passenger services (at this time adopted as a hypothesis).

⁵⁵ We are also required to consider the relevance of the list of pairs relevant to passenger services, as defined in paragraph 2(10) of Schedule 3 of the 2016 Regulations. We explained in our September 2017 consultation how we did so, and our proposals in relation to domestic versus international, and regular versus occasional services specifically.

⁵⁶ We are aware that where services are sponsored by local funders, the arrangements for holding operators neutral might vary. We have been investigating issues in relation to non-central Government funders, and how they hold operators neutral. We continue to work through these issues with potential affected funders, as we finalise these proposals.

5. The next step in the analysis was to investigate, based on available industry data sources, the extent to which each characteristic determines demand in practice (and therefore enables us to differentiate between market segments).
6. Currently, there are few open access passenger services running on the network, and franchised operators provide the majority of passenger services⁵⁷. As such, basing the analysis on data relating to existing OAOs only would have yielded limited results. Therefore, the consultants looked at all passenger services currently running on the network, in order to develop an approach to segmentation, which could be applied to either open access or franchised services⁵⁸.
7. Having identified the key determinants of demand, the consultants proceeded to investigate how each of these factors affected the costs, revenues and requirements for service quality associated with different services.
8. Existing industry data sources do not break down information relating to services based on the time of day. The lowest level of disaggregation available is the service code, which typically includes all services running between two stations during a day (and any intermediary stations the services call at). As such, the consultants did not investigate the time of day element further as part of this analysis.
9. Service groups, by definition, incorporate information about the geographic characteristics of services – i.e. which areas these services run in, and therefore whether these services could be described as suburban, inter-urban, regional, rural, etc. A service type (i.e. intercity, commuter or other) was assigned to each service code, as a proxy for journey purpose, using information from an industry demand-forecasting tool (MOIRA).
10. The analysis focused on estimating the net operating profit for each service code running on the network. This was calculated as the difference between the revenues earned by services within the service code, and the costs of running these services. The calculation of costs was on a modelled basis, taking into account the different requirements for service quality associated with different services (e.g. more comfortable rolling stock for longer distance services). The revenue associated with each service code was calculated based on actual train operator revenues, allocated to service codes using MOIRA service code revenue data.
11. Having calculated the net operating profit for each service code running on the network, the consultants ranked service codes based on this value to investigate whether the service characteristics identified initially had an impact on demand, and

⁵⁷ OAOs account for less than 1% of passenger revenue, according to [ORR's passenger rail usage statistics](#).

⁵⁸ In order to ensure comparability between open access and franchised services, data specific to franchised operators was not included in the analysis (e.g. franchise payments to funders or access charges only paid by franchised operators).

could therefore be used to inform a market segmentation. Generally, the analysis showed that similar services tended to have similar net operating profit values. For example, regional and rural services had lower net operating profit values, while intercity services had higher net operating profit values. This confirmed that the characteristics identified in the first stage of analysis did have a material impact on the costs of providing the transport services, their market prices or their requirements for service quality, and justified using these characteristics to inform a market segmentation.

12. The conclusion based on this high level analysis was that services with high net operating profit values tended to be those running between major UK cities (major intercity) or between London and more developed urban centres around London (long-distance commuter). Other services, such as rural, suburban or regional services, had lower operating surplus values.
13. For the two types of services identified as having high operating surplus values (and therefore potentially being market segments able to bear ICCs), the consultants undertook case studies to assess ability to bear in more detail. Their approach is explained in the consultancy report published alongside our September 2017 consultation⁵⁹.

⁵⁹ *PR18 Structure of charges review – Market can bear analysis: Passenger services*, Cambridge Economic Policy Associates & Systra, September 2017. This may be accessed [here](#).

Annex B: Definition for new entrant open access operators

1. In order to be treated as a new entrant OAO in relation to the phasing-in of ICCs, an OAO needs to:
 - (a) have a company number distinct from any other OAO, with its first ever track access agreement entered into in CP6; and
 - (b) at the time our initial track access approval takes effect, meet one of the following criteria:
 - (i) it is a completely new entrant OAO with no affiliation to an existing OAO at any point in its group company structure⁶⁰; or
 - (ii) if it is affiliated in any way to an existing OAO, it does not have any service codes⁶¹ with more than one station overlapping with the stations called at by any individual service code of that existing OAO⁶².
2. We seek to ensure that the implementation of our proposals results in a clear and objective definition of new entrant OAO, and balances the following two considerations:
 - (a) we do not want a new entrant OAO that is affiliated to an existing OAO to be unfairly discriminated against relative to a completely new entrant OAO with no connection to an existing OAO at any point in its group company structure⁶³; and

⁶⁰ For these purposes, “affiliate” means in relation to the existing OAO: a subsidiary or a parent company (or ultimate parent company) of the existing OAO; or a subsidiary of a parent company (or ultimate parent company) of which the existing OAO is itself a subsidiary. The terms “parent company” and “subsidiary” for these purposes are as defined in the Companies Act 2006.

⁶¹ If the OAO subsequently has an additional service code approved, this will not affect whether or not the operator is defined as a new entrant OAO (for the purposes of the ICC rates it pays), regardless of the stations that the additional service code calls at. However, any remaining threshold cannot be allocated to any service code subsequently approved that, if included as part of the initial approval, would have meant the OAO would not have been treated as a new entrant OAO for ICC purposes.

⁶² These criteria regarding overlapping stations can be illustrated by the following examples. If there are two service codes: service code 1 stops at stations A, B and C, and service code 2 stops at B, C and D, then service code 1 would be considered as having more than one station overlapping with service code 2. If there are three service codes: service code 3 stops at stations E, F and G, service code 4 at F, H and I and service code 5 at G, J and K, then service code 3 would not be considered as having more than one station overlapping with the stations in another service code.

⁶³ For example, if train company A is a completely new entrant OAO with no affiliation to an existing OAO, train company B is owned by the same owner group as an existing OAO and they both start to run open access services to somewhere that currently does not have a service run by an OAO, then we would expect both companies to be treated equally through the charges system.

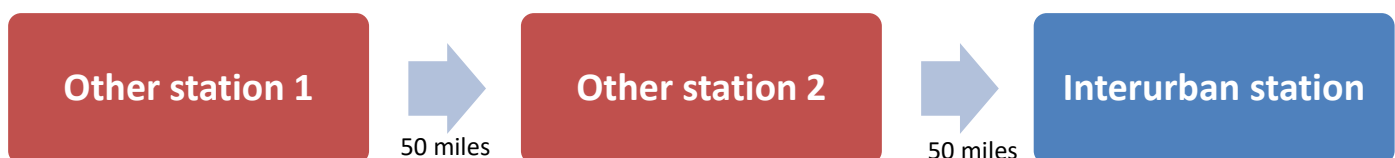
- (b) we do not want an existing OAO or its owner group to create an affiliate in order to benefit from phased-in ICCs on what amounts to an expansion of their existing services⁶⁴.

⁶⁴ For example we would wish to avoid an owner group of an existing OAO, train company C, setting up a new entrant OAO, train company D, to run very similar services to train company C in order to benefit from phased-in ICC rates.

Annex C: Examples of the application of ICCs to services falling into more than one market segment

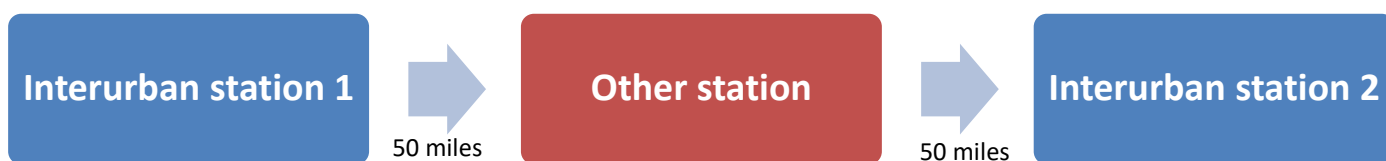
1. As set out above, we expect the ICC only to apply to the part of the service that falls within the interurban market. In practice, this means:
 - identifying whether the service stops at two or more stations that fall within the interurban definition (referred to as interurban stations);
 - calculating the distance (in train miles) between the two interurban stations that are the furthest apart; and
 - applying the £4 per train mile charge only to that mileage.
2. To implement this, we will likely specify a list of stations that fall within the interurban definition. However, this approach is subject to consultation.
3. Below we set out a number of illustrative examples, using the terminology of interurban stations (i.e. those within the interurban market) and other stations (i.e. those outside the interurban market).

Example 1: Not an inter-urban service



4. This is not interurban service (it only stops at one interurban station) and would not be charged the ICC.

Example 2: Interurban service



5. This is likely to be an interurban service and would be charged the ICC for the full length of the service.

100 miles at £4 per train mile
= £4 per train mile

Example 3: Interurban and other service



6. This service is likely to be classified as an interurban service for the first 100 miles of the journey, but the final 100 mile leg would be part of the other market segment.

100 miles at £4 per train mile **and** 100 miles at £0 per train mile
= £2 per train mile

Example 4: Interurban service



7. Despite stopping at non-interurban stations between its origin and destination, this is likely to be an interurban service and would be charged the full ICC.

300 miles at £4 per train mile
= £4 per train mile

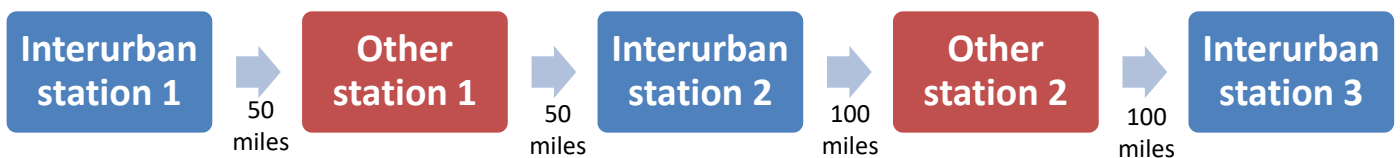
Example 5: Interurban and other service



8. This service is likely to be an interurban service for the last 50 miles of its journey, but the first 250 miles fall in the other market segment.

250 miles at £0 per train mile and 50 miles at £4 per train mile
= £0.67 per train mile

Example 6: Multiple interurban stations



9. Interurban stations 1 and 3 are the furthest apart, so the ICC would likely apply to the full 300 mile journey.

300 miles at £4 per train mile
= £4 per train mile



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