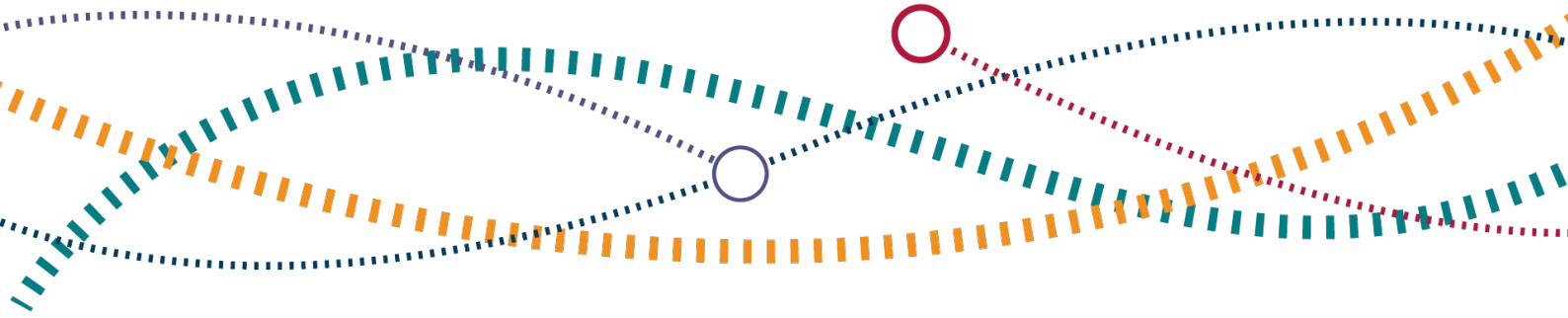
PR23 - Review of Network Rail's access charges

Technical consultation

Initial Proposals

15 July 2021



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Executive Summary

In this consultation we present initial proposals for incremental reform of Network Rail's access charges for the next control period (CP7, which will run over five years from April 2024). This review forms part of PR23, which we formally launched through an open letter to stakeholders in June 2021.

Access charges are paid by train operators (passenger, freight, and charter) for use of Network Rail's track and stations. They ensure that Network Rail recovers the costs of maintaining and renewing the network fairly from different users (as well as from taxpayers). They also influence the decisions that Network Rail, train operators and funders make, which affect the overall cost of the network and how efficiently it is used. Charges can therefore play a role in making the industry more efficient and improving outcomes for passengers, freight customers and taxpayers.

In deciding on any changes to Network Rail's charging framework for PR23, it is important that we take account of the changing commercial dynamics within the industry. Among other things, governments have replaced franchises with concession-style agreements and have brought services under greater direct public sector control or are in the process of doing so. This has affected the role of charges for most passenger operators on the network, potentially reducing their importance in influencing operational decisions.

The Williams-Shapps Plan for Rail ('the Plan'), published in May 2021, makes clear that concession-style agreements will be the dominant form of rail contract in use by the UK government. It also establishes that these contracts will be let in future by a new body that will also run the railway infrastructure: Great British Railways. The Plan sets out that the government is setting up a Rail Transformation Programme, which will consult and work with partners to develop a new rules-based access system for Great British Railways, along with a new generation of access contracts[1]. We understand the Plan anticipates that passenger operators who are awarded contracts to operate services on behalf of Great British Railways may not be required to pay access charges, reflecting the changed nature of their relationship with this body. However, Great British Railways will require a framework for charging other operators who use the network. This includes freight, open access and charter operators, as well as passenger operators contracted by Transport Scotland, Transport for Wales and other devolved rail authorities – who will continue to exercise their existing powers and responsibilities in relation to rail.

[1] The Rail Transformation Programme is responsible for designing and implementing the reform programme set out in the Plan. We understand that some specific aspects of this work may be taken forward through interim arrangements, once these have been put in place.

Given that the Rail Transformation Programme is at an early stage, at this point of PR23 we cannot accurately anticipate the future access system, the related approach to charging that may be applied by Great British Railways, and the changes to legislation that may be made to deliver and implement this programme. We cannot also be certain that the changes required to implement the new system will be in place by April 2024.

Furthermore, we consider that some of the core principles underpinning Network Rail's current charging framework may well remain relevant for Great British Railways in its future approach to charging other operators. In particular, access charges can continue to provide effective incentives for these operators to minimise costs and use the network efficiently. More broadly, under any future industry structure, it is important that information about the key drivers of network costs is retained, to enable effective decision-making. The cost allocation processes which underpin charges can provide part of this information, though it will be for the Rail Transformation Programme (and Great British Railways in future) to determine the specific approach that applies to its network.

For PR23, we are not proposing to make fundamental changes to the charging framework. This reflects that the development of the future access system is being led by the Rail Transformation Programme, in consultation with industry, and that we have to take decisions about PR23 on the basis of existing legislative requirements. This limits the extent to which we can make major changes to the structure of charges. It also reflects our view that the current framework has the potential to be relevant for Great British Railways in future, as the model that it applies to other operators using its network.

As such, for this review, we have prioritised identifying some incremental changes to the current charging framework that we could take forward as part of PR23. This would ensure that the framework remains fit for purpose, both in an interim period (until the Plan is fully implemented), but also potentially on an enduring basis if the current framework was to be adopted within the access system that applies for Great British Railways.

The key proposals for change that we have identified at this stage are:

- Removing the 'wash-up mechanism' for the fixed track access charge which is paid by operators on concession-style agreements[2];
- Improving the information available to operators on variable usage charge rates, alongside reviewing some aspects of how this charge is calculated and applied;

[2] This mechanism has already been suspended for the rest of CP6.

- Simplifying the administration of the traction electricity charge (EC4T), and ensuring there are sufficient incentives for operators to take up on-train metering; and
- Standardising some aspects of how the long term charge for managed and franchised stations is calculated.

Alongside these proposals, there are some other issues for which we need to undertake further work and engagement with industry, in order to develop more detailed positions.

We are seeking views on these potential changes – as well as on the areas for further work – as part of this consultation. We will consider responses to this consultation as part of the next phase of our work during the second half of this year, in advance of setting out a full set of preferred options in early 2022.

In the meantime, we will continue to work closely with the Department for Transport (DfT) and wider industry to understand in more detail how any transitional arrangements may work as Great British Railways is established, and how this may affect the charging framework. We will also work with Transport Scotland to consider how these arrangements will take account of existing devolved powers and responsibilities in respect of infrastructure in Scotland, in particular the interactions between charges and the network grant funding that is provided by Scottish Ministers to Network Rail.

We will remain flexible in PR23 to respond to industry developments, as transition and implementation plans become clearer.

Structure of this document

The rest of this consultation is structured as follows:

- Chapter 1 presents an overview of Network Rail's existing charging framework;
- Chapter 2 sets out the relevant context for this review, and our proposed approach and key priorities in light of this;
- Chapters 3 to 5 set out our initial proposals for individual charges, ordered as follows: infrastructure cost charges (ICCs); variable charges; and station charges;
- Chapter 6 sets out our initial view on the appropriate inflation index to apply to Network Rail's charges.

Responding to this consultation

We welcome views on the proposals set out in this consultation. Please send responses by email to pr23@orr.gov.uk by **24 September 2021.**

A full list of consultation questions is set out in Annex 4. We have also made available a consultation response template which contains further information on the publication of responses.

Overall timetable for review of charges

We plan to publish another consultation on Network Rail's access charges in early 2022. This will set out more detail on the issues we have identified in this document, and our preferred way forward. It will take account of responses to this consultation, as well as further engagement with industry over the rest of 2021.

Following that consultation, we intend to publish our conclusions on these issues later in 2022, at which point we will confirm which changes to the charging framework that we intend to implement for CP7. We will then proceed to work on detailed design and implementation issues arising from our decisions. We expect to work closely with industry on such issues. Network Rail will consult separately on the recalibration of each of the charges, in autumn 2022, to determine the specific prices that will apply in CP7.

An indicative timetable for the PR23 charges review is set out in **Annex 1**. These milestones may change as the review progresses, in particular in light of relevant industry developments.

We note that although we intend to conclude on changes to the overall structure of charges next year, the *level* of charges can only be determined towards the end of the periodic review process. This is because they are informed by traffic volume forecasts and Network Rail's overall funding settlement for CP7, which are finalised at this point in the process. Some charges will also be affected by issues which Network Rail consults on as part of the recalibration process. As such, while we can take some early decisions on the overall charging framework, we cannot determine and approve the specific charges before these issues have been finalised.

1. Overview of charging framework

1.1 Access charges are paid by train operators (passenger, freight, and charter) for use of Network Rail's track and stations. Network Rail received £2.4 billion in access charges revenue in 2019-20. This constituted around 27% of its total income, with the balance made up of network grant funding from DfT (£4.8 billion); grant funding from Transport Scotland (£0.5 billion); and other commercial income such as property rental (£1.3 billion)[3].

1.2 Access charges serve a number of purposes, besides ensuring that Network Rail recovers an appropriate level of costs from rail users. In particular, charges can provide **incentives for operators** to reduce network costs and make efficient use of the network. This is achieved by setting charges on a cost-reflective basis, so that operators face the direct costs that they cause (e.g. the wear-and-tear on the network, or the cost of electricity to power electric trains).

1.3 Furthermore, the information revealed by charges can support **better decision-making** by Network Rail and wider industry. This is by providing an impetus for Network Rail to attribute its costs to activities or network elements that cause those costs to be incurred, which improves the overall level of understanding of its cost structure and drivers. This information is relevant to decisions taken by Network Rail, for instance on where there is greatest scope for cost efficiencies. It also provides funders and other rail authorities with greater transparency over the long-term cost implications of train service specifications, and can allow for a greater level of scrutiny of Network Rail.

1.4 In these ways, charges can play a role in making the rail industry more efficient and ultimately improving outcomes for end users and taxpayers.

CP6 charging framework

1.5 We last reviewed Network Rail's charging framework as part of the 2018 periodic review (PR18). Through that review, we simplified this framework by combining and removing some charges[4]. There are now three broad types of charge paid by operators:

[3] ORR analysis of Network Rail's Regulatory Financial Statements, 2019/20, Statement 2, available here. Commercial income includes the Schedule 4 access charge supplement.

[4] Annex 2 sets out a summary of the key changes to the charging framework made in PR18.

(a) **Infrastructure cost charges (ICCs)**, which recover a portion of the fixed costs of rail infrastructure, i.e. costs which do not vary with network use in the short-term.

(b) **Variable charges**, which recover costs that are directly incurred by Network Rail when train services are operated over its network.

(c) **Station charges**, which recover the costs of operating, maintaining and renewing the stations that are owned by Network Rail.

1.6 Table 1.1 below summarises Network Rail's charging structure in CP6. The vast majority of charges revenue is paid by operators who are on concession-style agreements[5]. Other operators (freight, open access and charter) pay approximately £100 million per year (4% of total charges revenue in 2019-20), primarily in variable charges.

Table 1.1: Summary of Network Rail's CP6 charges

Charge		Paid by:	Recovers:	Income (£m, 19-20)
ICCs	Fixed track access charge (FTAC)	Passenger operators on concession-style agreements	Remaining income required to meet Network Rail's revenue requirement	1,254
	ICC for freight services[6]	Freight operators carrying certain commodities	A proportion of fixed network costs	0.5
	Open access ICC	Open access operators providing new interurban services	A proportion of fixed network costs	0
Variable charges	Variable usage charge (VUC)	All operators	Maintenance and renewal costs that vary with traffic	310
	Electrification asset usage charge (EAUC)	All operators of electrified services	Maintenance and renewal costs of electrification assets that vary with traffic	22
	Traction electricity charge (EC4T)	All operators of electrified services	Cost of supplying electricity for traction	445

[5] We use this term to refer to all operators that are commissioned by funders and other devolved rail authorities to provide passenger services. At the start of CP6, most of these operators held franchise agreements with funders. Following the COVID-19 pandemic, these agreements have been suspended.

[6] For billing purposes, this is known as the freight-specific charge, or FSC.

Charge		Paid by:	Recovers:	Income (£m, 19-20)
Stations charges	Station long term charge (LTC)	All passenger operators	Maintenance, renewal and repair costs for stations owned by Network Rail	247
	Qualifying Expenditure (QX)	All passenger operators at managed stations	Day-to-day running costs of providing services and amenities at managed stations	90

Legal framework

1.7 Schedule 3 of the Railways (Access, Management and Licensing of Railway Undertakings) Regulations 2016 ("the 2016 Regulations") establishes the principles of access charging, and exceptions to those principles, which underpin Network Rail's charging framework and specific charging rules.

1.8 The 2016 Regulations state that charges for the minimum access package must be set to reflect "the cost that is directly incurred [by Network Rail] as a result of operating the train service"[7]. Network Rail sets its variable charges in accordance with this. In doing so, it must have regard to the Commission Implementing Regulation (2015/909) which sets out further detail on what qualifies as directly incurred costs[8].

1.9 To obtain full recovery of its costs, Network Rail can under certain conditions levy 'mark-ups' above directly incurred costs[9]. Network Rail does this through the imposition of ICCs. Before approving such ICCs, we are required to ensure that they are only levied on those operators who can continue to operate services after paying these charges.

1.10 Network Rail must ensure that the charging system in use is based on the same principles over the entire network (i.e. across the whole of Great Britain), and results in equivalent and non-discriminatory charges for operators that provide

[7] See Schedule 3, paragraph 1(4) ('Principles of access charging'). The minimum access package is those services set out in Schedule 2 of the 2016 Regulations, essentially the services necessary to access the infrastructure.

[8] In accordance with section 6(7) of the European Union (Withdrawal) Act 2018, Commission Implementing Regulation (EU) 2015/909 of 12 June 2015 on the modalities for the calculation of the cost that is directly incurred as a result of operating the train service is Retained EU Law.

[9] Schedule 3, Paragraph 2 of the 2016 Regulations.

similar services in similar parts of the market[10]. However, there is scope for the system to differ where operators are in clearly identifiable different market segments, based on the type of services operated (e.g. passenger and freight operators).

1.11 Furthermore, in setting the charging framework, we must also have regard to our wider duties under Section 4 of the Railways Act.

[10] Schedule 3, Paragraph 1 of the 2016 Regulations.

2. ORR's proposed approach and priorities

2.1 This chapter explains ORR's proposed approach and priorities for the PR23 charges review, in light of changes to the industry's commercial structures, the Williams-Shapps Plan, and our appraisal of the current charging framework.

Adapting to industry change

2.2 As set out in our PR23 launch letter, we are starting PR23 at a time of significant change and uncertainty. We need to ensure our overall approach to determining the charging framework for PR23 takes appropriate account of this context.

2.3 To date, we have seen the changing commercial dynamics in industry affect the role that charges play in driving behaviours within industry. Most significantly, the move from franchise agreements to concession-style agreements, and the move to bring some services into public ownership, have meant that charges are treated largely as a pass-through for operators subject to these agreements i.e. they are not financially exposed to them. This is likely to have reduced the incentive effects for these operators[11]. It also means that public funding for Network Rail is effectively channelled through multiple different arrangements, in a way which may not serve a clear purpose.

2.4 On the other hand, freight, open access and charter operators remain directly exposed to charges – and cost-reflective charges therefore continue to provide these operators with incentives to reduce costs and make best use of the network.

2.5 The Williams-Shapps Plan, published in May 2021, will bring further change. It makes clear that concession-style agreements will be the dominant form of rail contract let by the UK government, and in future by Great British Railways. Great British Railways will absorb Network Rail, bringing together rail finances and uniting industry costs and revenues. We also understand the Plan anticipates that passenger operators who are directly contracted by Great British Railways may not be required to pay access charges to this body[12].

[11] We note that franchise agreements have previously protected operators from changes in some charges at each periodic review.

[12] See the illustration of future money flows on page 51 of the Williams-Shapps Plan.

2.6 For third-party operators (i.e. freight; open access; charter; and passenger operators contracted by other devolved rail authorities), the Plan sets out that Great British Railways will make decisions in accordance with a new rules-based access system. While the Plan does not describe the detail of this system, there will remain a clear need for Great British Railways to recover an appropriate level of costs from these operators, through access charges.

2.7 We expect the new access system, including the approach to charges, will be considered as part of the Rail Transformation Programme in consultation with industry, in advance of Great British Railways being established. This will need to take account of the interests of operators that sit outside the remit of Great British Railways, as well as the interests of Transport Scotland, Transport for Wales and other devolved rail authorities – who will retain their existing devolved powers and responsibilities. In particular, the relationship between grant funding provided by Scottish Ministers for infrastructure in Scotland, and the charges levied by Great British Railways, will need to be considered in more detail.

Approach to PR23

2.8 We have considered how these changes affect our approach in PR23 in respect of any changes that should be made to the current charging framework.

2.9 If Great British Railways is fully operational by the start of CP7, and legislation is in place to introduce the new rules-based access system envisaged by the Plan, we expect that Great British Railways will have a policy for charging operators for use of the network. Any changes to the current framework made through PR23 would not take effect in these circumstances.

2.10 However, at this stage of PR23, the timing and scope of any changes to legislation remain uncertain. Furthermore, we need to take some key decisions on the charging framework by autumn 2022, to allow time for the recalibration process and to make the required changes to track access contracts that may apply for the start of CP7. Unless there is significantly greater certainty in respect of any new legislation before then, our overall approach to PR23 must therefore be based on requirements set out in existing legislation (in particular the 2016 Regulations).

2.11 Our ability to make certain changes to the charging framework, to anticipate the future access system put in place by Great British Railways (such as exempting

some operators from paying charges), is limited by this legislation[13]. In addition, the access system and approach that Great British Railways will take to charging operators for network access has not yet been designed. It is for the UK government to lead this work, in consultation with industry and aligned with changes in legislation and the development of wider industry frameworks, as well as with the plans of devolved authorities, rather than led by ORR through PR23.

2.12 As such, our starting position for PR23 is that we should retain the charging framework in substantially similar form to that in PR18. This would involve retaining the three broad types of existing charge across the entire Great Britain network.

2.13 We have then considered whether to explore any changes to the existing charging framework at all in PR23, given the prospect of wider reform to the access system before or during CP7. In doing so, we have had regard to two factors:

(a) As new legislation may not have been passed by April 2024, the current framework may need to apply on an interim basis for part or all of CP7; and

(b) Whether the existing framework could be adopted by Great British Railways on an enduring basis, to apply to operators who will hold access contracts with this body.

2.14 In respect of the second consideration, our view is that there are some core access charging principles that may remain appropriate under any future framework; in particular, that charges should aim to be cost-reflective and non-discriminatory. This would underpin a system that supports and safeguards third-party operators, and continues to send appropriate signals about the costs that Great British Railways incurs on their behalf. Our initial engagement with these operators has also highlighted that there are benefits in maintaining a stable and predictable set of charges, to support longer-term investment decisions (e.g. in respect of choices between different types of rolling stock). This suggests that it could be beneficial to maintain a degree of continuity in the approach to the charging framework between Network Rail and Great British Railways.

2.15 Furthermore, within Great British Railways, there will remain a need for a process to allocate infrastructure costs to different regions, services and network activities, to inform effective decision-making at each level. Great British Railways could

[13] This includes charges which are treated as a pass-through to a rail authority. We intend to discuss with funders the implications of this, and how this could most effectively be managed, as part of the next phase of this review.

choose to adopt the cost allocation methodologies that underpin the current charging framework as a means to achieve this.

2.16 In light of this, we consider that there is value in exploring some proportionate changes to certain aspects of the existing charging framework. This will ensure that the overall framework remains as effective as possible for CP7, and for Great British Railways to adopt as the regime to apply to relevant operators in future, if it chooses.

2.17 With this in mind, we have identified a limited number of areas where we consider there is an opportunity to make improvements to this framework. Some of these are related to potentially strengthening the incentives created by charges. In other areas, we consider there is scope to reduce the complexity and administrative burden of aspects of some charges, where this no longer appears proportionate.

2.18 Furthermore, we intend to review some specific decisions made during PR18 that we said we would revisit in future (e.g. the suitability of caps on existing charges). We also intend to review the evidence underpinning which types of operator can bear ICCs – which may have been affected by market developments since PR18 – to ensure these charges comply with legislative requirements.

Environmental outcomes

2.19 For PR23, we have also considered the role of charges in supporting environmental outcomes. We have said in our launch letter that we expect to place increased focus on these outcomes in PR23. This reflects the growing importance of delivering a more environmentally sustainable rail network, to support governments' roadmaps to net zero carbon and other environmental objectives[14].

2.20 The current charging framework does not include any environmental charges. Some stakeholders have highlighted the potential for access charges to play a role in this area, for instance by providing a financial incentive for using more environmentally-friendly modes of traction on the network (e.g. hybrid or electric). However, the existing legal framework establishes that charges should be set to reflect the costs to the infrastructure manager (i.e. Network Rail) of providing network access, rather than wider costs to the environment[15]. We consider this significantly constrains our ability to take account of environmental costs in setting Network Rail's charging framework. Similarly, it would only be possible to offer

[14] DfT has recently published a rail environment policy statement alongside its Transport Decarbonisation Plan. Transport Scotland has also published a Rail Services Decarbonisation Action Plan in July 2020.

[15] See Schedule 3 of the 2016 Regulations, paragraphs 1(4,5) and 2(1).

specific discounts on charges levied in limited circumstances (e.g. to encourage the development of new rail services), and on a time-limited basis.

2.21 We are not therefore proposing to amend any existing charges to explicitly reflect the environmental costs associated with network use. Nevertheless, where relevant, we have had regard to environmental outcomes when developing our initial proposals (e.g. in respect of EC4T). As our review progresses, we will consider any views from industry as to how charges could further support environmental objectives, insofar as these are consistent with existing legal requirements[16]. Furthermore, in determining the overall level of charges, we will take account of likely environmental impacts – including the risk from higher aggregate charges of modal shift to road transport, particularly for freight.

2.22 We are also considering how the wider PR23 process can be used to promote better environmental outcomes in rail. In addition, we intend to publish a separate consultation later this year on ORR's Sustainable Development Policy and Guidance on Environmental Arrangements for Licence Holders.

Summary of proposals

2.23 Based on the overall approach set out above, we have developed a set of initial proposals for changes to Network Rail's charging framework, for PR23. These are summarised in Table 2.1 below, in respect of each type of charge, and explained in more detail in the rest of this consultation.

2.24 We note that, for some proposals, we need to undertake further work and engagement with industry in order to set out more detailed positions.

2.25 In addition to developing these proposals further and considering their merits, we will continue to work closely with the Rail Transformation Programme, Transport Scotland, Transport for Wales, other devolved authorities and industry to understand how any transitional arrangements may work and how this may affect the charging framework. We will remain flexible to respond as plans become clearer. This may change the approach we need to take in PR23 as we progress through this period.

[16] In particular, the Rail Safety and Standards Board (RSSB) has recently commissioned a study on the feasibility of different incentive schemes that can support the business case for deploying carbon emissions reduction and mitigation technologies on trains. We have liaised with RSSB on this work during spring 2021, and we will consider any recommendations that emerge from this work. We understand that RSSB expects to report the main findings from this work later this year.

Table 2.1: Summary of initial proposals for PR23 charges review

Type of charge	Key changes to framework	Other proposals / Areas for further work
Infrastructure cost charges	• Remove the fixed track access charge 'wash-up mechanism'	• Continue to use Network Rail's cost allocation methodology as the basis for allocating fixed costs to operators • Update the 'market-can-bear' test that determines the scope and level of ICCs for freight and open access operators
Variable charges	• Remove the partial fleet metering charging approach for EC4T • Remove the loss incentive mechanism from the EC4T reconciliation process	• Retain the existing phasing-in of VUC increases for freight and charter operators (subject to further review after recalibration) • Review the cost categories eligible to be recovered through the VUC • Consider further whether to apply the VUC to Network Rail's engineering trains • Work with Network Rail to improve the information available to operators on VUC rates • Explore options for a fund to encourage greater take-up of on-train metering for EC4T • Retain the EAUC in its current form
Station charges	• Treat managed and large franchised stations consistently when calculating the LTC • Categorise new franchised stations as 'new' for a five-year term from the date of opening	• Work with Network Rail on improving published guidance and explanatory notes on station LTCs • Consider further whether to change how LTC expenditure is apportioned between operators • Consider further whether to regulate the fixed element of QX and standardise its calculation

Consultation questions

Question 1: Do you have any views on our overall approach to the PR23 charges review, in light of the prevailing industry context?

Question 2: Do you agree with the initial proposals and areas for further work that we have identified? Are there other priority areas that we should seek to address?

3. Infrastructure cost charges

Summary

We are proposing that operators on concession-style agreements will continue to pay the fixed track access charge (FTAC). We propose that the basis for operators' FTACs will continue to be Network Rail's fixed cost allocation methodology. We also propose to retain the existing structure of the FTAC, which is paid as a fixed annual lump-sum, rather than partly varying the charge to reflect changes in timetabled traffic.

We are proposing to continue to apply ICCs to freight and open access operators, subject to reviewing and updating the market-can-bear tests that we carried out for these market segments in PR18. We intend to commence this work later this year.

Introduction

3.1 This chapter discusses our approach to ICCs, which recover a portion of Network Rail's fixed costs. In CP6, the following ICCs are paid:

(a) Operators on concession-style agreements pay the **fixed track access charge (FTAC)**. The FTAC is an annual lump-sum charge, allocated to each operator based on forecast traffic levels for the control period. It is by far the largest ICC, representing more than 99% of Network Rail's ICC revenue.

(b) Freight operators pay **ICCs for carrying certain commodities** (which for billing purposes is known as the freight-specific charge, or FSC). This charge recovers a proportion of Network Rail's fixed network costs. The commodities that are liable to pay ICCs, and the level of the charge, is based on an assessment of operators' ability to bear the charge.

(c) Open access operators are also liable to pay **ICCs on new interurban services**, on a phased-in basis. However, no operators currently do so.

3.2 In addition to ICCs, Network Rail recovers fixed costs through direct grant from funders. Network Rail's net revenue requirement (i.e. its total revenue required over the control period, minus revenue from other charges and income sources) is first allocated to relevant operators to calculate the "pre-grant" FTAC amount. Forecast network grant payments are then subtracted from each

operator's pre-grant FTAC in proportion to their share of total FTAC. As such, the FTACs paid by operators on concession-style agreements depends on the level of network grant payments – with higher grant payments implying lower FTACs.

3.3 In the rest of this chapter, we firstly consider the underlying approach to allocating fixed costs between different operators, which underpins the calculation of ICCs. We then set out our initial proposals in respect of the specific ICCs paid by each type of operator.

Approach to allocating fixed costs

3.4 In order to set ICCs for train operators, it is firstly necessary to allocate Network Rail's fixed costs to operators (noting that the actual level of ICCs paid by operators is different to these cost allocations)[17].

3.5 As part of PR18, Network Rail revised its methodology for allocating fixed costs to improve the cost-reflectivity of the FTAC and overall transparency over the key drivers of fixed costs. The methodology is set out in Network Rail's CP6 conclusions document, and summarised in Annex 3 of this consultation.

3.6 The revised approach to allocating fixed costs between operators serves several purposes. By providing greater transparency over the geographical distribution and the drivers of fixed costs, it can support better decision-making by Network Rail (for instance in respect of how to most effectively reduce its fixed cost base). If reflected in charges, it provides funders and other devolved rail authorities with more information about the long-run cost implications of the service specifications which underpin their agreements with train operators, which can be used to inform decisions in this area[18]. In doing so, it also results in a fairer allocation of costs between these bodies, i.e. one which is more closely related to the costs that are caused by their use of the network.

Proposed approach for PR23

3.7 Our initial view is that Network Rail's existing cost allocation methodology remains an appropriate basis on which to allocate fixed costs to operators. The

[17] As explained above, for operators on concession-style agreements, the actual FTAC is lower than their total allocation of fixed costs because some of this allocation is funded through network grant. The level of ICCs for freight and open access operators is primarily informed by their ability to bear mark-ups, rather than deriving directly from cost allocations, as discussed in more detail later in this chapter.

[18] For freight and open access operators, as explained above, the level of ICCs is informed primarily by their ability to bear mark-ups.

methodology is now well-established and allocates costs in line with recognised economic principles. It is also reasonably well-understood by industry.

3.8 We have considered the scope to make Network Rail's fixed cost allocation methodology more cost-reflective for CP7, by increasing the number of traffic characteristics that are used to allocate traffic-avoidable costs to operators[19]. In principle, this could improve industry's understanding of long-run cost drivers, and the magnitude of costs that are potentially avoidable by removing certain types of traffic. However, it would likely require a significant increase in the complexity of the model, which could affect its usability, as well as potentially creating new data requirements. It is also not clear that this would materially affect resulting cost allocations (and therefore the level of ICCs paid by operators). On balance, we do not therefore propose to pursue any such changes for PR23[20].

3.9 Network Rail has also told us that it is separately planning to review the traffic characteristics that are currently used to allocate traffic-avoidable costs, to determine whether these remain appropriate or whether there is a case for adding or removing some characteristics. It is also intending to review where the methodology can be simplified in some areas. In principle, we are supportive of this work, particularly if it leads to a more easily understandable methodology and a model which can potentially be used more easily and flexibly to inform decisions within industry (e.g. over network planning and service specifications). However, it is also important that it does not result in a material loss of transparency over fixed cost drivers, or a less fair allocation of fixed costs.

3.10 We intend to work with Network Rail to understand the implications of any proposed refinements to this methodology. We also expect Network Rail to consult on this ahead of its recalibration exercise, so that industry can comment on any specific refinements that are proposed. This will inform our view on whether to incorporate these changes, as part of the overall approach to determining ICCs.

[19] As explained in Annex 3, these are costs which could potentially be saved in the long-run by reducing the volume and type of traffic running over the network.

[20] We note that Network Rail has previously considered the feasibility of distinguishing between peak and off-peak traffic, and allocating a greater proportion of costs to trains that use the network during busy periods (and therefore drive the requirement for / cost of assets providing the peak capacity of the network). However, it concluded that this would not be proportionate. This is discussed in Annex C, *A new method for allocating network fixed costs: Report for Network Rail*, Brockley Consulting, September 2017.

Consultation questions

Question 3: Do you have any views on our proposal to use Network Rail's cost allocation methodology as the basis for allocating fixed costs to operators in CP7? Are there any elements of the methodology that you consider should be improved as part of this review?

ICCs for passenger operators

Operators on concession-style agreements

3.11 Operators on concession-style agreements pay the **fixed track access charge (FTAC)**. The FTAC for each operator is based on the fixed cost allocation methodology described above, adjusted to reflect network grant income received from funders. It is paid as an annual lump-sum, set at the start of the control period, so does not vary in response to changes in the level of operators' services or Network Rail's costs during a control period.

3.12 In PR18, we decided to introduce a volume incentive mechanism known as the **FTAC wash-up**. The mechanism adjusts an operator's annual FTAC in proportion to variations in timetabled train miles, relative to a pre-determined baseline. However, in 2020 we decided not to implement this mechanism in CP6[21]. We said that we would review the value of this mechanism in the context of PR23.

Proposed approach for PR23

3.13 We propose to retain the FTAC in CP7. The magnitude of operators' FTACs would be underpinned by Network Rail's existing cost allocation methodology, as described in the previous section.

3.14 However, as explained in paragraph 3.2, operators' FTACs are also affected by the level of grant funding which is made available by funders. As part of this review, we will work with both DfT and Transport Scotland to understand the grant funding that they will make available, and how this approach may differ from that in PR18. In doing so, we will need to consider how changes in the balance of Network Rail's funding may affect other devolved rail authorities who commission

[21] The introduction of this mechanism was initially delayed due to the May 2018 timetable problems, which created a concern that traffic baselines determined in advance of CP6 might overstate expected traffic, and could lead to unintended payment flows. We then worked with Network Rail and operators from August 2019 to March 2020 to set traffic baselines. However, due to the impact of COVID-19 on traffic baselines, we decided in October 2020 to suspend the mechanism for the remainder of CP6.

passenger services, such as Transport for London, Transport for Wales and Merseytravel[22]. We will also need to consider any relevant implications for future funding arrangements from the government's Rail Transformation Programme, as this programme is developed.

3.15 Under any future approach, it remains important that there is sufficient transparency and understanding over the fixed costs that different train operators impose on the network, and the extent to which these costs are funded through operators' FTAC or direct grant funding. As part of this review, we will consider how this information should continue to be provided to industry.

FTAC wash-up mechanism

3.16 On the basis that operators continue to pay FTAC in CP7, we have considered the merits of reintroducing the FTAC wash-up mechanism. At this stage, we are minded to remove this mechanism[23]. This means that FTACs would continue to be set as a fixed annual lump-sum at the start of each control period.

3.17 The FTAC wash-up mechanism is more complex to implement than a lump-sum charge, given the need to agree timetabled traffic baselines. Repeating the process for CP7 would involve additional time and resource for industry, particularly given the continued uncertainty around likely passenger demand levels as the industry recovers from the COVID-19 crisis (which would complicate the process for setting baselines in advance of the next control period).

3.18 At the same time, the move to concession-style agreements has blunted the incentives on these operators to respond to the FTAC wash-up mechanism in the way previously envisaged, and we expect this to continue to be the case in CP7. Furthermore, under a reformed industry structure in which Great British Railways takes decisions about optimal network use, and implements them through its contracts and service plans with passenger operators, this would likely further diminish the need for a separate financial incentive to grow passenger volumes[24].

[22] We understand that these bodies generally hold their operators neutral to changes in FTAC, so would be affected by a change in the level of grant funding from DfT, through the impact on their operators' FTAC.

[23] As explained above, this mechanism has been suspended for CP6, but it remains in Schedule 7 of operators' track access contracts (with the difference between baseline and timetabled traffic effectively set to zero). Under this proposal, we would amend track access contracts to remove this mechanism.

[24] Decisions by Great British Railways would be expected to take account of the cost and revenue impacts of more intensive network use, including the benefit of higher revenues from accommodating more passenger services on the network.

3.19 We recognise that removing the wash-up mechanism leaves Network Rail without strong *financial* incentives to accommodate additional publicly-contracted services, in any interim period before Great British Railways is established[25]. Given Network Rail's funding and governance structure, we consider that the most effective way to ensure Network Rail makes efficient use of capacity on the network is through our regulation of Network Rail's System Operator (SO) function. We took steps in PR18 to improve the SO's technical capability in this area, so that it better understands the impacts of requests for network access, and how to accommodate more traffic on the network without unduly affecting performance. We have been closely monitoring the SO's progress and approach in this area, and will continue to push for improvements over the rest of CP6[26].

3.20 We are also considering our approach to regulating the System Operator for PR23, and how we build on the work that has been undertaken in CP6 to improve how Network Rail (and potentially Great British Railways) uses and develops network capacity. We expect to provide further information on this in spring 2022, as part of a consultation on the overall regulatory framework for CP7.

Consultation questions

Question 4: Do you have any views on our initial proposal to retain the FTAC for operators on concession-style agreements, on a fixed lump-sum basis (i.e. not to reintroduce the FTAC wash-up)?

Open access operators

3.21 Open access services currently comprise around 1% of passenger train miles on the network[27]. In PR18, we introduced an ICC for open access operators for the first time. This policy aimed to facilitate increased on-rail competition between passenger services over the longer-term, by allowing open access operators to benefit from potentially greater access to the network, while requiring that they

[25] In respect of Network Rail's financial incentives when considering *between* adding publicly-contracted or open access services to the network, this will be affected by how we set ICCs for open access in CP7. We discuss this in the next section. We note that, under the current charging framework, Network Rail only receives ICCs when adding some new open access services to its network.

[26] We have set out our view of the SO's recent performance in this area in our Annual Assessment of Network Rail for 2021-22 (Chapter 9), which is available here.

[27] Based on ORR data on passenger kms by operator, for the period preceding the COVID-19 pandemic.

contribute towards Network Rail's recovery of fixed costs where they are able to do so.

3.22 In order to levy ICCs, the 2016 Regulations require us to assess the ability of different market segments to bear charges above directly incurred costs. We undertook a market-can-bear test for open access operators in PR18, and concluded that services operating in the interurban market segment would be able to bear a charge[28]. We introduced an ICC payable by new interurban services of £4 per train mile, to be phased-in over the first five years of the operation of new services. Existing interurban services were exempted from paying an ICC.

3.23 Currently, no open access operators pay this ICC. This is because no new interurban services have commenced since the start of CP6. However, as part of our open access policy, we now take account of ICC revenues in assessing open access applications through the "not primarily abstractive" test that informs our decision-making. First Rail's planned London to Edinburgh service would also be liable to pay an ICC, in line with the phase-in profile we set in PR18.

Proposed approach for PR23

3.24 We propose to retain the ICC for open access operators in CP7, subject to the outcome of a market-can-bear test to be conducted later this year. We consider that this policy is consistent with the Williams-Shapps Plan, which recognises the potential for new open access services to be explored, in order to make best use of the network[29]. It also supports our wider duties in respect of:

(a) having regard to Secretary of State funds. Removing ICCs for open access operators would imply recovering these fixed costs from other passenger operators through FTACs, thereby increasing the industry's overall reliance on public subsidy; and

(b) promoting competition in the provision of services. We recognise that levying ICCs potentially makes open access entry less attractive, as it increases the cost that operators bear when operating a service. However, because we take the forecast additional income that ICCs could generate for Network Rail

[28] We defined an interurban service as one for which: at least one station served has average entries / exits above 15 million passengers per year, or the station served is within two miles of a station meeting that criterion; at least one other station served has average entries / exits above 10 million passengers, or is within two miles of a station meeting that criterion; and two of the stations meeting these demand thresholds are at least 40 miles apart. See our March 2019 conclusions document on open access ICC implementation.

[29] This is set out on pages 58 to 59 of the Plan.

into account when assessing open access applications, this could increase the likelihood that an open access proposal for access rights is granted.

3.25 In order to determine which open access services should bear an ICC, and the level of this charge, we intend to update the market-can-bear test undertaken during PR18. We consider this is particularly important in light of the COVID-19 pandemic and its impact on passenger demand, which may in turn affect the future of open access services, as well as their ability to bear ICCs[30].

3.26 We intend to start work on updating our open access market-can-bear test later this year, with a view to setting out a provisional view on market segmentation (and which segments can bear ICCs) in our preferred options consultation in early 2022. We expect to appoint consultants to support this work in autumn 2021, and to engage with stakeholders over the course of the autumn. However, a final decision on the scope and level of this ICC will need to be kept under review until our Final Determination, as more evidence comes to light on the future economic position of the rail industry.

ICCs for freight operators

3.27 Freight operators currently pay an ICC for carrying certain commodities. In line with the relevant legislation on mark-ups, we only levy an ICC on market segments (or commodities) which can bear a mark-up, at a level which they can bear.

3.28 In PR18, we concluded that freight services carrying electricity supply industry (ESI) coal, iron ore, spent nuclear fuel and ESI biomass could bear these charges. We set the ICC for ESI coal, iron ore and spent nuclear fuel in CP6 to maintain the overall level of total charges for each commodity in line with CP5 exit levels. For ESI biomass, we set the ICC such that there was a less than 10% expected reduction in demand for transporting biomass by rail, as the result of the charge.

Proposed approach for PR23

3.29 We propose to retain an ICC for freight services in CP7, subject to the outcome of a market-can-bear test to be conducted later this year. Given our duty to have regard to Secretary of State funds, and consistent with our aim for a cost-reflective charging structure (subject to other relevant considerations), we consider it is

[30] We note that we have received applications for interurban services since the onset of the pandemic, which indicates that open access operators consider there are services which remain commercially viable (in the presence of an existing ICC) given expected levels of future demand.

important that the freight sector continues to make an appropriate contribution to the long-run costs that it causes on the network.

3.30 We intend to commence work on updating the market-can-bear test for freight operators later this year, in parallel with our market-can-bear test for open access, to determine which freight services should be liable to pay ICCs. We expect to retain the same approach to market segmentation that has been used in previous reviews i.e. based on *commodities carried*. This approach is now well-established and understood by the freight industry; remains practicable to implement; and is likely to reflect differences in underlying demand for rail freight, which is the basis for an assessment of ability to bear mark-ups.

3.31 We will firstly review whether the existing market segmentation remains appropriate[31]. We will then assess whether there have been any changes to which commodities can bear ICCs in light of new information and market developments since PR18, such as: recent evidence on the competitive position of rail freight relative to alternative modes of transport; wider trends in commodity-specific demand for rail freight; and consideration of latest government policy towards specific commodities. As with our open access work, we expect to engage with stakeholders (including freight operators and their customers) on this work, over autumn 2021.

3.32 We intend to set out our provisional view on market segmentation for freight, and which commodities can bear ICCs, as part of our preferred options consultation in early 2022. As with the open access ICC, a final decision on the scope and level of freight ICCs will be kept under review until our Final Determination, as more evidence comes to light on the future economic position of the rail industry[32].

[31] For instance, whether there are any major new commodity flows, or whether any existing commodities should be segmented further.

[32] For freight, the level of these charges will also take account of any changes to other charges paid by freight operators in CP7.

4. Variable charges

Summary

We propose to largely retain the existing approach to the variable usage charge (VUC), including the gradual increase in VUC rates for freight and charter operators to reach full cost reflectivity by end of CP7 (as set in PR18), subject to a further review later in the periodic review. We plan to review Network Rail's analysis on the cost categories eligible to be recovered through the VUC. We are inviting input from stakeholders on the case for applying VUC to Network Rail's engineering trains. We also plan to work with Network Rail to seek to improve how VUC rates and the underlying evidence base are communicated and presented to stakeholders, to strengthen the incentives provided through this charge.

For the traction electricity (EC4T) charge, we are considering how best to encourage greater take-up of on-train metering. We are also proposing to simplify the administration of this charge by removing the partial fleet metering charging approach and the loss incentive mechanism.

Introduction

4.1 This chapter discusses our approach to variable charges, which recover costs directly incurred by Network Rail when train services operate over its network.

4.2 Variable charges help incentivise operators to make more efficient use of the network, by getting them to consider whether the benefits of operating a service outweigh the costs, and to reduce the costs they cause by running trains (for example, by choosing to operate more track-friendly vehicles). While these signals may be less relevant for operators on concession-style agreements, we expect these charges will continue to incentivise other operators who remain directly exposed to them. Variable charges also provide useful information to Network Rail and wider industry about the relative costs of network use, which can help drive more efficient use of the network through their actions.

4.3 There are currently three variable charges paid by operators:

(a) the variable usage charge (VUC);

(b) the traction electricity (EC4T) charge; and

(c) the electrification asset usage charge (EAUC).

Variable Usage Charge

4.4 The VUC recovers the operating, maintenance and renewal costs that Network Rail incurs as a result of small (or marginal) changes in traffic levels, assuming network capacity remains fixed[33]. It does not reflect the costs of providing or changing the capability or capacity of the network.

4.5 The VUC recovers costs relating to three types of activity: track, civil engineering and signalling. Track wear and tear costs make up the large majority of the expenditure that is recovered through this charge[34].

4.6 The VUC is disaggregated by vehicle class and freight commodity. Typically, heavier and faster vehicles incur a higher VUC, reflecting the relatively higher levels of damage that they cause to the network[35]. The rates are averaged across the network as a whole, resulting in a single price for each permutation of vehicle type and commodity across the network.

4.7 The methodology for calculating VUC rates is based on a combination of: (1) forecasts of maintenance and renewal expenditure as a function of changes in traffic; (2) periodic review forecasts of maintenance and renewal expenditure over the next control period; and (3) engineering models used to calculate the relative amount of infrastructure damage caused by different types of vehicle.

Issues for PR23 review

4.8 Initial feedback from stakeholders suggests that the current VUC framework is broadly fit for purpose. However, our review of its effectiveness and of our previous PR18 commitments, as well as our initial discussions with stakeholders, have highlighted the following areas for further consideration[36]:

(a) phasing-in of VUC increases for freight and charter operators;

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[33] In practice, rail infrastructure operating costs are widely understood not to vary materially with traffic, and the charge was set in CP4 to recover variable maintenance and renewal costs only.

[34] See Network Rail's consultation on variable charges and station charges in CP6, and a PR13 report by SERCO ("VTISM Analysis to Inform the Allocation of Variable Usage Costs to Individual Vehicles").

[35] Note that both vehicle characteristics and the commodity carried contribute to the effective vehicle weight that has to be supported by the infrastructure.

[36] As in PR18, we again considered disaggregating the VUC on a geographical basis to increase the cost-reflectivity of the charge. However, we concluded that this would add a significant layer of complexity, which we do not consider would be proportionate.

(b) cost categories eligible to be recovered through the VUC;

(c) wear and tear costs caused by Network Rail's engineering trains; and

(d) complexity and industry's understanding of the VUC.

4.9 We are also aware that the Vehicle / Track System Interface Committee (V/T SIC)[37] is considering whether there is a case for reviewing the evidence underlying the calculation of VUC rates to improve accuracy. Any new evidence will be taken into account as part of the recalibration process expected to begin in autumn 2022. We expect to say more about what, if any, new evidence is likely to be available, and whether it should be adopted for charging purposes in CP7, in our preferred options consultation in early 2022.

4.10 In the rest of this section, we briefly discuss each of these issues and set out our proposed approach for PR23.

Phasing-in of VUC

4.11 In PR18, we decided to phase-in the increase in VUC for freight and charter services that was due to take place at the start of CP6 (following recalibration), such that the charge was expected to reach its fully cost-reflective level by the end of CP7. This policy aimed to strike a balance between stability and predictability, affordability for the market segments in question, and full cost-reflectivity. It was designed in line with the 2016 Regulations, which allows for time-limited capping and phasing-in of increases in charges, while stipulating that costs directly incurred must eventually be recovered in full.

4.12 As a result of this policy, VUC rates (before CPI inflation) remained constant for the first two years of CP6, relative to the last year of CP5, and have now started to increase at an average annual rate of 3.34%.

Proposed approach for PR23

4.13 We have considered whether to review our policy position on the phasing-in of VUC during CP7 (for example, by reducing or extending the length of time taken to reach full cost reflectivity). For now, we are proposing to retain the existing policy, such that the VUC will increase (in real terms) at a uniform rate from the end of CP6 to reach full cost reflectivity by the end of CP7. The precise rate of growth will be determined as part of the recalibration process, due to take place later in the

[37] This is an industry wide working group responsible for the vehicle track interaction strategic model (VTISM), an industry model that underpins VUC.

periodic review. The key factors driving this proposal are the need for stability and predictability for industry.

4.14 However, we note that we will need to review our position again after the PR23 recalibration stage, once it is clearer how the fully cost-reflective VUC rate for freight and charter operators will change for CP7.

Consultation questions

Question 5: Do you support our proposal to retain the PR18 phasing-in policy for freight and charter operators, subject to further review later in the periodic review process?

Cost categories eligible to be recovered through the VUC

4.15 In PR18, Network Rail undertook, at ORR's request, a detailed assessment of whether the costs included with the VUC comply with the definitions in the 2016 Regulations and in the Commission Implementing Regulation EU 2015/909 (as set out in paragraph 1.8)[38].

4.16 However, this work was conducted late in the PR18 process, which made review of the work challenging. Based on a light-touch review, we concluded that no changes were required but stated that we would revisit this issue in PR23, especially in light of the compressed review timescales in PR18.

Proposed approach for PR23

4.17 We plan to review Network Rail's PR18 findings over the coming months and publish our views in the preferred options consultation in early 2022. We would welcome any input from stakeholders that may assist this review.

Consultation questions

Question 6: What, if any, additional evidence should we consider in our review of Network Rail's assessment of eligible costs to be recovered through the VUC?

[38] This assessment is set out in Appendix 2 of Network Rail's conclusions on variable charges and station charges in CP6, available here.

Wear and tear costs caused by Network Rail's engineering trains

4.18 Network Rail uses engineering trains to maintain and renew the network[39]. Currently, those trains are not charged for the wear and tear that they cause. However, the cost of that wear and tear is not passed on to train operators through the VUC. Network Rail has explained to us that these costs are instead separated out from the calculation of the VUC for operators, and recovered through other funding sources.

4.19 In its response to our PR18 draft determination, GB Railfreight suggested that Network Rail's engineering trains are some of the least track-friendly on the network and argued that Network Rail should pay for the wear-and-tear costs caused by these vehicles. Network Rail argued in response that the wear-and-tear caused by engineering trains is a necessary cost associated with repairing wear-and-tear caused by other trains.

4.20 We made no changes as part of PR18 but said that we would revisit this issue again in the next periodic review.

4.21 One could argue that charging engineering trains a VUC would amount to Network Rail paying itself, and that this would have no effect on its behaviour. However, it would increase transparency over the track-friendliness of its own rolling stock and over its cost drivers. In turn, this may create a reputational incentive in relation to Network Rail's choice of engineering rolling stock. We also expect that this change would come at relatively low administrative cost in terms of recalibrating the VUC.

4.22 From an operator perspective, the effect on operators' VUC rates, if any, is likely to be negligible. This is because, as explained above, the VUC already only recovers the cost of wear and tear directly caused by a specific operator's train, and the VUC calculation separates out the wear and tear caused by engineering trains that Network Rail recovers from other funding sources. Any possible impact on VUC rates would come, not from charging engineering trains, but from any potential improvements in the accuracy of the VUC calibration process that may follow as a result.

Proposed approach for PR23

4.23 On balance, it is not clear that any potential benefits from this change would outweigh implementation costs. However we would welcome additional evidence

[39] According to a June 2018 report by Arup for ORR and Network Rail ("Review of Network Rail's CP6 Variable Usage Charge Assessment"), engineering trains account for less than 3% of total traffic.

from stakeholders on the relative merits of this proposal, as well as views on other ways in which the issue of the track-friendliness of Network Rail's engineering trains could be addressed as part of PR23.

4.24 We will review all evidence provided and set out our proposed way forward in our preferred options consultation in early 2022. Should we conclude that a change in VUC methodology is required, we anticipate that this would be implemented at the recalibration stage.

Consultation questions

Question 7: Do you have any views on the relative merits of applying VUC to Network Rail's engineering trains?

Complexity and industry's understanding of the VUC

4.25 Feedback from freight customers has suggested that the methodology underpinning the VUC is not generally well understood. This can make it difficult for these customers to predict how VUC rates will change over time (as the result of periodic reviews) or what vehicle characteristics are most likely to drive changes in VUC rates.

4.26 In turn, some freight operators consider that this hinders customers' ability to make optimal rolling stock choices. It can also create uncertainty which may prevent potential users from choosing to move their goods by rail.

4.27 We therefore consider it is desirable to improve industry's understanding of the VUC methodology and to remove unnecessary sources of uncertainty. This has the potential to deliver enduring benefits in respect of more efficient network use, even in a reformed industry structure.

4.28 With this in mind, we have considered whether there is scope to reduce complexity in the existing VUC calculation methodology. Our view is that this is inherent to this type of charge if the results are to produce clear and accurate signals about the costs incurred by different types of rolling stock. We also considered the possibility of reducing the number of VUC rates, but have ruled this out for the same reason, and because stakeholder feedback suggests this is not a problem.

4.29 However, we consider that there is potential to convey the underlying information in a more transparent way at relatively low cost. Currently, operators can use a calculator provided by Network Rail to determine the charges applicable for a

specific type of vehicle and commodity by inputting all the relevant characteristics. However, the calculator returns one set of charges for a full set of characteristics. To understand how charges would change as a function of one type of characteristic (say, vehicle class or operating speed), a user would have to run the calculator repeatedly and separately write down inputs and outputs. This can make the calculator cumbersome to use for carrying out comparisons.

4.30 We consider that the calculator could be improved to make it more informative for operators making rolling stock decisions. For example, it could allow the user to flex a sub-set of relevant parameters and present all results simultaneously, such that users could see at a glance the likely impact of variations in certain vehicle characteristics.

Proposed approach for PR23

4.31 We propose to work with Network Rail to explore potential ways to improve the calculator. As any changes can be implemented outside the formal periodic review process, we intend to begin this work after publishing this consultation, with a view to potentially making changes during the course of CP6.

4.32 We would welcome any other ideas from stakeholders on further ways we could improve industry's understanding of the principles and evidence underpinning the calculation of VUC rates.

Consultation questions

Question 8: Do you have any suggestions on how the VUC calculator could be improved, or other ways in which we could improve industry's understanding of the principles and evidence underpinning the calculation of the VUC?

Traction Electricity Charge

4.33 The traction electricity (also known as electric current for traction or EC4T) charge recovers the cost of electricity supplied by Network Rail to power trains.

4.34 This charge is calculated based on one of the following three approaches:

(a) **metered** consumption (based on readings taken from meters on trains);

(b) **modelled** consumption (based on estimated consumption, subject to an end of year volume reconciliation exercise); or

(c) **partial fleet metering, or PFM** (which extrapolates metered consumption from metered trains to estimate consumption for un-metered trains).

4.35 At present, around two-thirds of EC4T consumption on the network is metered, while one-third is modelled. PFM is not currently used by any operator.

4.36 Modelled consumption is calculated by multiplying an estimated consumption rate by total electrified mileage in each rail period. Consumption rates are derived from theoretical and empirical relationships between consumption, vehicle characteristics and typical operating characteristics[40]. The EC4T charge is then obtained by multiplying modelled consumption by electricity market prices paid by Network Rail[41].

4.37 At the end of each financial year, all parties using the modelled consumption approach (including both operators and Network Rail) participate in a volume reconciliation exercise (also referred to as the **volume 'wash-up'**), which compares total modelled consumption against total actual consumption across given sub-networks known as electricity supply tariff areas (ESTAs). This results in additional payments by Network Rail to operators if actual consumption is below total modelled consumption, or by operators to Network Rail in the opposite case.

4.38 The end of year volume reconciliation process includes a **loss incentive mechanism**, which aims to incentivise Network Rail to reduce transmission losses on the network. This mechanism operates by allocating to Network Rail an additional amount of consumption in each ESTA, entirely independent of Network Rail's own consumption, in proportion to transmission losses on that part of the network. The effect of this mechanism is to reduce the amount of total wash-up consumption that is allocated to operators, and hence to reduce the size of any wash-up payments, whichever direction they flow in[42].

4.39 At the end of each financial year, Network Rail and all operators using electric traction participate in a cost reconciliation exercise (also referred to as the **cost 'wash-up'**) which compares the tariff per unit of consumption charged by Network Rail with the actual tariff per unit paid by Network Rail to electricity suppliers. This also results in additional payments between Network Rail and operators.

[40] Consumptions rates are published on the Traction Electricity Modelled Consumption Rates List and calculated using this methodology.

[41] For more details, see the Traction Electricity Rules

[42] As explained above, wash-up consumption and wash-up payments can either be positive (actual consumption is higher than modelled and operators make wash-up payments to Network Rail) or negative (actual consumption is lower than modelled and operators receive wash-up payments from Network Rail).

Issues for PR23 review

4.40 Following an initial review of the EC4T framework, and based on feedback from stakeholders, we propose to prioritise the following three areas for further consideration in PR23:

(a) incentivising greater take-up of on-train metering;

(b) removal of the partial fleet metering (PFM) charging approach; and

(c) removal of the loss incentive mechanism.

4.41 We consider that changes in these areas have the potential to make this charge simpler and more cost-reflective. We consider that the first proposal can also support environmental objectives, as explained in more detail below.

Incentivising greater take-up of on-train metering

4.42 As explained in paragraph 4.35, we estimate that around one-third of consumption is not currently metered, with the figure being slightly higher for passenger than for freight trains[43]. This presents three potential issues:

(a) the absence of metering prevents operators from monitoring actual consumption for individual trains, which would enable them to set up mechanisms to encourage lower energy consumption, thereby improving efficiency and environmental outcomes;

(b) modelled rates can lead to a mismatch between actual consumption and charged consumption, leading to operators being under or over-charged as charges do not closely reflect actual electricity costs incurred[44]; and

(c) the wash-up process can lead to unpredictable year-end fluctuations in cash-flows[45].

4.43 We understand that the two main reasons for operators continuing to use modelled rates are i) the costs involved in installing meters on old rolling stock; and ii) the perception that meters are inaccurate. We would welcome further evidence from industry on the extent to which these factors are limiting the take-up

[43] We estimate that around 35% and 24% of passenger and freight consumption is unmetered respectively.

[44] ORR's analysis of year-end volume wash-up data from 2009-10 to 2019-20 shows large discrepancies between actual and modelled consumption for most years.

[45] For example, between 2015-16 and 2019-20, the wash-up in ESTA A varied between -2.29 % and -12.65% of actual consumption, and between 14.87% and -8.07% in ESTA B.

of metering. In respect of the latter issue, we are aware that meters go through extensive quality assurance processes, and we have not yet seen any clear evidence that they are inaccurate.

Proposed approach for PR23

4.44 Given the associated costs, we consider that this issue could be addressed in part by establishing a **ring-fenced fund** to support the installation of on-board meters for older rolling stock. However, this would require diverting some of Network Rail's available funding from other uses and is therefore a matter for funders. We intend to explore with Network Rail and funders the merits of this proposal, relative to other priorities for the railway. We would also need to ensure that such a fund would be compliant with the 2016 Regulations, in respect of balancing Network Rail's income with infrastructure-related expenditure[46].

4.45 In the event that we take forward this proposal, we would also consider complementary measures to help accelerate the take-up of metering. These could include, for example, making metering mandatory at some point during the next control period.

Consultation questions

Question 9: Do you have any views on the relative merits of a ring-fenced fund to incentivise on-train metering? How else could greater take-up of metering be incentivised?

Removal of Partial Fleet Metering (PFM)

4.46 To date, no operator has chosen to adopt PFM. We understand that this is partly to do with the fact that PFM is more complex than other charging approaches and comes with added administrative costs to operators. However, this complexity is largely inherent in the design of this charging mechanism and we do not consider that it can be usefully simplified while performing its purpose. Furthermore, PFM-related provisions take up a significant proportion of the traction electricity rules (TERs), which makes this document less user-friendly.

[46] Paragraph 15(1) of the 2016 Regulations. We note that in PR08, we allowed Network Rail to carry forward part of its CP3 Safety and Environment fund into CP4, to fund metering. This facility was worth up to £8.75 million. By way of illustration, we estimate that a fund of a similar size could cover the cost of retrofitting on-board meters for up to 650 AC train-sets and 50 DC train-sets (based on an average unit cost of £12,000 for AC train-sets and £24,000 for DC-train sets, which were the estimated reasonably efficient costs of metering when this fund was last reviewed in 2013).

Proposed approach for PR23

4.47 In order to simplify the charging framework, and given that no operator has opted-in to PFM since its introduction in PR13, we propose to remove this charging mechanism. We welcome stakeholders' views on this proposal.

Consultation questions

Question 10: Do you have any views on our proposal to remove the PFM charging approach for EC4T?

Removal of the loss incentive mechanism

4.48 The loss incentive mechanism was designed under the assumption that wash-up payments would flow from operators to Network Rail, with higher transmission losses therefore resulting in lower wash-up payments to Network Rail. In practice, the opposite is typically the case, with payments flowing from Network Rail to operators. This happens because modelled consumption rates are generally higher than actual consumption. It means that Network Rail gets to keep some of the difference between modelled and actual consumption (the amount of which increases in proportion with transmission losses), which is the opposite of the incentive that the mechanism was intended to create[47].

4.49 It may be possible, in principle, to re-design the mechanism so that it works as intended. However, Network Rail has also argued that there are no major cost-effective interventions it can make to reduce transmission losses in the short-term, and that significant reductions in transmission losses would require large scale changes in electricity supply assets, the cost of which would far outweigh any financial benefits through reduced transmission losses.

Proposed approach for PR23

4.50 For the reasons given above, we are minded to remove the loss incentive mechanism.

[47] For example, under the mechanism, instead of paying out to operators, Network Rail received £5m, £8m and £4.5m in 2017-18, 2018-19 and 2019-20, respectively.

Consultation questions

Question 11: Do you have any views on our proposal to remove the loss incentive mechanism?

Electrification Asset Usage Charge

4.51 In PR18, we considered combining the EAUC and VUC charges to simplify the overall charging framework. However, we concluded that this would be administratively burdensome to implement. It would also reduce the overall transparency of Network Rail's costs.

Proposed approach for PR23

4.52 For the same reasons as in PR18, we are proposing to leave this charge unchanged beyond recalibration for CP7.

Consultation questions

Question 12: Do you have any views on our proposal to make no changes to the EAUC in PR23, beyond recalibration?

5. Station charges

Summary

We are considering making some small changes to the station long term charge (LTC) to improve its clarity and transparency. This includes asking Network Rail to review and align the calculation methodologies for large franchised and managed stations.

For the qualifying expenditure (QX) charge, Network Rail has indicated that it would like the fixed element of this charge to be regulated (for managed stations). We consider that the process for implementing this would be complex and lengthy, and may not be a proportionate change at this point in time. However, we intend to consider the merits of this option further. To inform this, we are keen to hear stakeholder views on this matter.

Introduction

5.1 This chapter discusses our approach to station charges. In CP6, the following two charges are paid by train operators whose services depart a station:

(a) The **station long term charge (LTC)**, which allows Network Rail to recover the cost of maintaining, repairing and renewing (MRR) operational property (e.g. station buildings, train shed roofs, platform canopies) and station information and security systems (SISS) (e.g. information screens, public address systems, CCTV) at managed and franchised stations[48].

(b) The **qualifying expenditure (QX) charge**, which allows the station facility owner (SFO)[49] to recover the day-to-day running costs of providing shared services and amenities at stations. This charge is made up of a '**fixed**' element, recovering direct costs such as station staff, cleaning and refuse collection costs, and a '**management fee**' element which recovers overhead costs and allows for a reasonable profit.

[48] Managed stations are stations that Network Rail operates day-to-day. This is as opposed to franchised stations, where a train operator (usually, but not always, the principal train operator at that station) operates the station. There are currently 20 managed stations.

[49] The SFO is responsible for the day-to-day running of the station. At managed stations, Network Rail is the landlord and SFO. At franchised stations, Network Rail is the landlord and a train operator is SFO. There is a third type of station, where an operator is landlord and SFO, but these are beyond the scope of this review.

5.2 The LTC is levied on SFOs by Network Rail. It is a regulated charge, which means that ORR sets the principles on which the charge should be calculated and subsequently approves its value for every station. The QX charge is levied by SFOs on train operators. Only the management fee element is regulated by ORR.

5.3 In parallel with ORR's initial work to review station charges, Network Rail has commissioned its own review of station access charges. As part of this work, which is still ongoing, Network Rail's consultants have engaged with industry to identify issues with the current station charges and consider potential reforms.

5.4 Our view, based on the evidence gathered to date, is that the current set of station charges is generally fit for purpose. Nonetheless, we have identified a number of incremental changes that could improve the effectiveness of these charges, which we set out below and on which we are seeking views from stakeholders.

Station Long Term Charge

5.5 All operators pay an LTC for each individual station they depart. The charge is calculated differently for franchised and managed stations. In the case of franchised stations, Network Rail forecasts total operational property and SISS MRR expenditure at a route level for the next control period.

(a) For the operational property element, stations are grouped into several categories based on passenger usage. Total route-level expenditure is allocated to those station categories in line with each category's share of long-term average renewal expenditure. The resulting cost for each station category is then allocated equally to every station within that category.

(b) For the SISS element, total route-level expenditure is allocated to individual franchised stations based on the relevant route's annual average SISS renewal cost over 35 years.

5.6 The sum of a station's allocated operational property and SISS MRR costs is its LTC[50]. SFOs can recover a proportion of the LTC from other relevant operators that call at the station, based on that operator's proportion of vehicle departures from the station.

5.7 In the case of managed stations, expenditure forecasts are made for each individual station separately. Another difference is that operational property MRR and SISS renewals costs at managed stations are recovered over a longer horizon

[50] Which the SFO pays to Network Rail (via a lease, incorporating the relevant Station Access Conditions).

than the upcoming control period (SISS maintenance costs are still forecast for the upcoming control period). This enables the 'lumpier' renewals activity costs to be spread over time. Similar to franchised stations, total expenditure per station is split between the relevant operators in proportion to vehicle departures.

Issues for PR23 review

5.8 We are of the view that the LTC in its current form is broadly fit for purpose. Our review and Network Rail's discussions with stakeholders have nonetheless highlighted some areas for potential incremental improvements:

(a) the complexity and transparency of the LTC;

(b) consistent treatment of large franchised and managed stations;

(c) the apportionment of the LTC amongst operators; and

(d) the approach to charging new stations.

5.9 We discuss each of these issues and propose an approach for CP7 below.

Complexity and transparency of the charge

5.10 Network Rail's consultants have told us that, while the overall purpose of the LTC is well understood by industry, the methodologies used to calculate the charges for franchised and managed stations are considered complex by some. In particular, the method for allocating costs to station categories and then to individual franchised stations lacks clarity. A number of operators also pointed more generally to their lack of involvement and engagement in the recalibration process for this charge, which reduces transparency.

Proposed approach in PR23

5.11 Network Rail has told us that it is planning to publish guidance and explanatory notes on the franchised and managed station LTCs to increase understanding across industry. We support this proposal as a relatively straightforward improvement and expect that Network Rail will provide adequate levels of detail on the cost categories included in the charge, the calculation and forecast methods, and worked examples.

5.12 As these changes can be implemented outside the formal periodic review process, we expect Network Rail to be in a position to produce and consult on new guidance during the course of CP6. We will ask Network Rail to set out next steps following the publication of this consultation document.

Consistent treatment of managed and large franchised stations

5.13 Franchised station LTC-related operational property expenditure is allocated equally to individual franchised stations within each station category in a route. As this equates to an average charge for each category, the charge for an individual station does not necessarily reflect the actual expenditure at that station. The presence of a large station (with its associated high MRR activity) in a category can make this issue worse, as it can materially distort the LTCs for all franchised stations in that category.

Proposed approach in PR23

5.14 We propose to change the LTC calculation method for the largest or most complex franchised stations, such that those stations are treated similarly to managed stations (i.e. the LTC would be calculated separately for these individual stations, based on station-specific expenditure forecasts). The LTC for other franchised stations would continue to be calculated at a category level.

5.15 We will work with Network Rail to develop the details of this proposal, in advance of our preferred options consultation in early 2022. As part of this work, we will ask Network Rail to review its station categorisation criteria to determine specifically which franchised stations should be classified as large or complex, and treated similarly to managed stations. Any changes will be implemented at recalibration.

5.16 We are of the view that this change would enhance the cost reflectivity of the charges at these larger/more complex stations and eliminate their impact on the LTCs of smaller stations within their category. While there will be an increased administrative burden in calculating individual LTCs for more stations, we consider that this is outweighed by the benefit of greater cost reflectivity and transparency.

Consultation questions

Question 13: Do you have any views on our proposal to calculate the LTC for large/complex franchised stations based on station-specific expenditure forecasts?

Apportionment of LTC-related expenditure between operators

5.17 Currently, SFOs apportion the total LTC-related expenditure between operators based on the number of vehicle departures[51]. We have considered whether there may be other metrics that could be used to apportion expenditure that better reflect underlying cost drivers (e.g. number of passengers)[52]. This could improve the overall cost-reflectivity of the LTC, and send better signals to train operators about the effect of their operational decisions on stations and station assets. In doing so, this could also result in a fairer allocation of costs between operators.

Proposed approach in PR23

5.18 Having considered the availability of, and rationale for, alternative apportionment metrics, such as passenger numbers, our initial view is that there is not a clear case for changing the current approach. We consider that any potential improvements to the apportionment approach, in terms of increased fairness or cost reflectivity, are likely to be small in comparison to the administration costs of calculating alternative metrics (potentially on an ongoing basis). However, we welcome further input from stakeholders on this matter[53].

Consultation questions

Question 14: Do you have any views on better metrics that could be used to allocate LTC-related expenditure between operators? What would the potential benefits and costs of these alternative metrics be relative to the current approach?

[51] Condition F10 of the National Station Access Conditions (SACs) and paragraph 41 of the Independent Station Access Conditions (ISACs) details this.

[52] Consider a train operator running trains with a higher passenger load factor from a station than another operator. If both operators have the same number of vehicle departures from the station, they would pay the same station LTC. However, the fact that the first operator attracts more passengers could mean that it is driving more of the MRR costs at the station (i.e. a larger station requiring more assets to upkeep).

[53] As part of a periodic review, ORR typically only reviews and approves the LTC at a station level rather than its subsequent apportionment amongst operators. Nevertheless, there are provisions within the SACs that enable us to make amendments to the allocation of the LTC amongst train operators using a station. Paragraph 11.4 of Condition 11 of the SACs and paragraph 42.4 of the ISACs sets out ORR's powers in relation to the LTC, including our ability to amend any agreement incorporating the relevant Station Access conditions, as well as the Station Access Conditions themselves, as part of an access charges review.

Approach to charging new stations

5.19 A franchised station that opens within a control period (known as a 'new' station) incurs a lower LTC than existing stations. This is because new stations are expected to incur lower maintenance and renewals costs early in their life.

5.20 As part of PR18, ORR asked Network Rail to review the evidence base underpinning the charging of new stations. Network Rail's analysis indicated that the operational property element of the LTC should be set at 10% of the forecast expenditure levels for existing stations, until the end of the control period during which the station opened. The analysis indicated that the SISS element should be treated similarly to that of existing stations.

5.21 In response to our consultation with key stakeholders on this issue in January 2020, Transport Scotland expressed concerns that new stations opening closer to the end of a control period incur the lower operational property charge for a shorter timeframe than new stations that open earlier in the control period. We acknowledged Transport Scotland's point in our concluding letter on this issue, and said that we would revisit this issue in PR23.

Proposed approach in PR23

5.22 Having considered Transport Scotland's views, we propose that Network Rail categorises all new franchised stations as 'new' for a fixed five-year term from the date of opening. This means that if a new franchised station opened on the first or last day of CP7, both stations would incur a lower LTC for the same length of time. We consider that this change would make the overall charge more cost-reflective, at a negligible administrative cost.

Consultation questions

Question 15: Do you have any views on our proposal to class stations that open within a control period as 'new' for a fixed five-year period from the date of opening?

Qualifying Expenditure Charge

5.23 All operators that depart a given station pay the QX charge to the SFO. It is charged for each individual station.

(a) The **fixed element** of the QX charge forms most of the revenue that SFOs receives from the charge, covering the cost of cleaning, light maintenance,

station staff and utilities. It is determined by negotiation between SFOs and the train operators that use the station in question.

(b) The **management fee** element of the QX charge covers central support costs (such as facilities management and information systems; corporate communications; and legal, planning and regulation), and includes a profit element which is levied as a percentage of the fixed element.

5.24 The total QX charge at each station is split between the relevant operators using that station, in proportion to the number of vehicle departures at the station.

Issues for PR23 review

5.25 In PR18, we considered whether it would be appropriate to regulate the fixed element of the QX charge but decided to prioritise improving the transparency of the charge. Network Rail has asked us to reconsider the option of regulating the QX fixed element for its **managed stations**, as part of PR23. We discuss this potential change in more detail below, along with our proposed approach.

Regulating the fixed QX element and standardising its calculation

5.26 Network Rail has told us the process to determine the QX charge is administratively burdensome for industry. It highlighted that obtaining agreement from multiple operators (at every managed station) can take significant time and is susceptible to delays if any single party involved in the negotiation disputes the charge for a given station. It also said that this process has in the past failed to result in agreement over the passenger offer at a given station (e.g. in respect of required staffing levels), which has affected passenger experience and safety at these stations, or required Network Rail to make up the funding shortfall from other sources in order to fund necessary activities.

5.27 In addition, Network Rail considers there is a lack of clarity in the QX charge cost categories in station access agreements, including uncertainty around which maintenance activities fall under the scope of the QX charge or the LTC, which adds to these difficulties.

5.28 Network Rail has proposed that ORR should regulate the entirety of the QX charge (including the fixed component) using a clarified set of cost categories[54],

[54] Specifically, it has suggested that the QX charge should be limited to recovering operational costs only (station staff, cleaning etc.), with light maintenance costs removed from the scope of the charge and all maintenance costs being instead recovered by the LTC.

thereby removing the need to undertake a negotiation process with each train operator using a managed station. It has argued that this would bring the QX charge in line with other access charges, replacing the negotiation process with a more transparent charging methodology designed to recover efficient costs. Under this option, the QX charge would also be published in price lists prior to a new control period, improving transparency and reducing uncertainty.

5.29 We recognise these potential benefits, but we note that passenger operators would, in this option, lose some of their ability to directly influence Network Rail's QX expenditure at stations they use. This ability can encourage Network Rail to improve its cost efficiency. Furthermore, the transition to Great British Railways may serve to reduce the future administrative burden of negotiating the QX charge, if operators who are directly contracted by this body are no longer required to pay it (though we recognise that existing issues with this process would likely continue to apply for operators contracted by other devolved rail authorities).

5.30 In addition, there is currently no contractual reopener in the independent station access conditions (ISACs) giving ORR the right to determine the fixed element of the QX charge. We therefore do not consider ORR currently has the right or power to do so. The process for establishing the QX fixed element as a regulated charge would require an amendment to the relevant part of the ISACs to provide the reopener that we may then exercise as part of PR23, to produce relevant regulatory amendments. Under Part 2 of the ISACs, Network Rail already has the power to propose a modification to the ISACs; this would require support from station users and other relevant parties, before being submitted to us for approval. Alternatively, Part 2 enables ORR to modify the ISACs in some circumstances, but this would require a minimum of 180 days to come into effect.

5.31 As part of this process, a charging methodology would need to be developed and set out in the ISACs – either alongside or subsequent to the initial amendment – so Network Rail can calculate the QX charge for each managed station in accordance with this methodology.

Proposed approach in PR23

5.32 We need to undertake further work to fully assess the merits of this option and also to consider whether some of the benefits could be achieved in other ways[55]. We will continue to work with Network Rail to understand this proposal in more

[55] For instance, reviewing and amending the cost categories recovered by the fixed element of the QX charge could be undertaken independently of regulating this charge, and could potentially address some of the issues with the existing negotiation process.

detail once Network Rail's consultants have completed their review and developed a full proposal for consideration.

5.33 We will also take account of stakeholders' views received as part of this consultation. In particular, we are keen to understand operators' views on the existing QX charge negotiation process and its outcomes. We would also welcome views from rail authorities about the relative merits of this option in a reformed industry structure in which Great British Railways owns and operates stations.

5.34 Furthermore, in assessing this option, we will need to consider the implications for existing franchised stations, for which the QX charge fixed element is also determined through negotiation between station users and the relevant SFO.

5.35 We note that, in the event that we pursue some or all aspects of this option further, the process for modifying the ISACs may need to begin in advance of our preferred options consultation in early 2022, in order to complete this process in time to determine QX charge as part of PR23. At this stage, given the lead times required for an ORR-led amendment, we consider that a Network Rail-initiated amendment to the ISACs would likely be preferable. We will continue to liaise with Network Rail about this and will provide an update to industry as necessary.

Consultation questions

Question 16: Do you have any views on the relative merits of making the QX fixed element a regulated charge for managed stations?

6. Inflation indexation

Summary

We are proposing to retain the Consumer Price Index (CPI) as the general inflation index for updating Network Rail's access charges (and payment rates in other mechanisms where we set the method of indexation) in CP7.

Introduction

6.1 Network Rail's access charges (and payment rates in other mechanisms where we set the method of indexation[56]) are adjusted by general inflation each year over the course of each control period. This is because we consider that Network Rail is not able to control the risks associated with the general level of inflation in the economy. This is consistent with the approach taken by other regulators.

6.2 The specific rates paid by operators for each relevant charge are published in Network Rail's price lists. These are expressed in prices for a year preceding the start of the next control period. All price lists are then indexed (i.e. adjusted) for each year of the control period, in line with movements in general inflation.

6.3 In PR18, we changed our method of indexation for CP6 from the Retail Price Index (RPI) to the Consumer Price Index (CPI). This was on the basis that CPI is a better and more robust measure of general inflation than RPI and should therefore provide more appropriate economic signals for Network Rail and its stakeholders.

6.4 We considered using a slightly different measure of general inflation to CPI, known as CPIH, which includes owner-occupiers' housing costs. However, we decided against this on the basis that:

(a) CPI is the measure of general inflation targeted by the Bank of England;

(b) there was greater availability of CPI forecasts; and

(c) differences between CPI and CPIH have historically been relatively small.

[56] These include Schedule 4 and Schedule 8 payments. We are consulting separately on the Schedule 4 and 8 regimes, but we have included them in this proposal as we use the same inflation index for these payments as for access charges.

6.5 We said we would review the use of CPI over CPIH in our next periodic review.

Proposed approach in PR23

6.6 Our initial view is that CPI remains an appropriate index to update Network Rail's CP7 price lists for access charges and payment rates in other mechanisms. CPI remains the inflation measure that is targeted by the Bank of England and, while CPIH has now been classified as a National Statistic for several years, there remains a greater availability of forecasts for CPI than CPIH[57]. We have also not identified any clear reasons to favour moving to CPIH for the next control period.

6.7 Set against this, a move to CPIH would require Network Rail to restate its financial information in developing its business plans, so that its forecast income (including from access charges) and expenditure is calculated and presented on a consistent basis. This was a problematic issue in PR18 in the transition from RPI to CPI. Maintaining the use of CPI indexation would preserve a consistent approach across control periods.

6.8 We note that the difference between CPI and CPIH remains very small, so the financial impact on both Network Rail and train operators of indexing access charges by CPIH would likely be negligible[58]. We also note that both general inflation measures continue to be used by UK regulators[59].

6.9 As part of our assessment of Network Rail's OMR costs for CP7, to provide advice and assurance on Network Rail's funding, we will address the effect of specific changes in Network Rail's input prices (i.e. the incremental level of inflation actually experienced by a business, above or below the general level of inflation), because of the particular mix of goods and services that it purchases.

6.10 Finally, we note that Network Rail's network grants are *not* index-linked. We expect that funders will continue to take this approach to grant funding for CP7, but intend to discuss this as part of our work with them on the grant funding that they will make available for the next control period.

[57] The Bank of England and Office for Budget Responsibility (OBR) produce regular CPI forecasts.

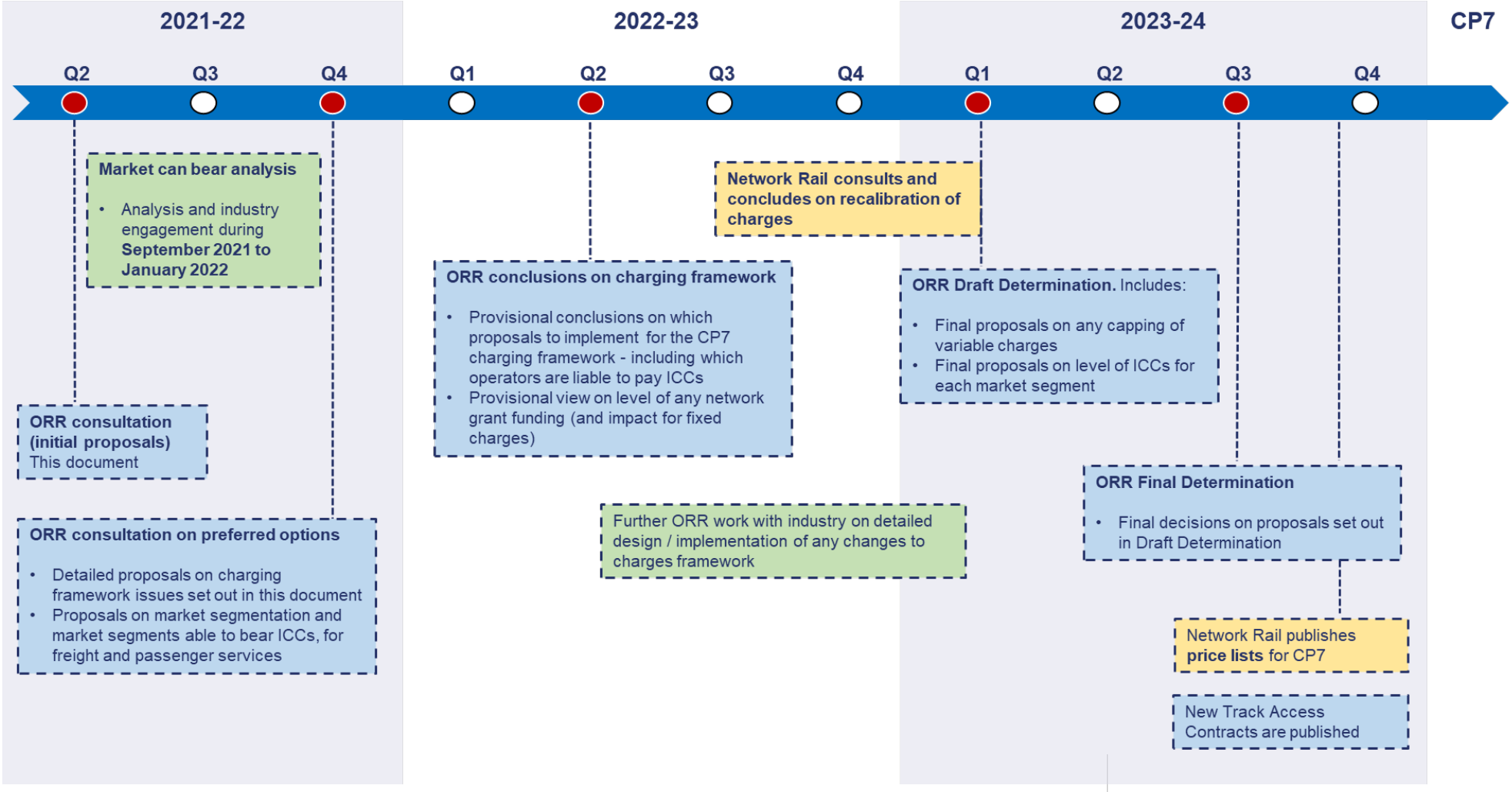
[58] The average difference between 12-monthly inflation rates given by CPI and CPIH, since our PR18 Final Determination, is 0.1%. Based on ONS Consumer Price Inflation data for May 2021, https://www.ons.gov.uk/economy/inflationandpriceindices/bulletins/consumerpriceinflation/latest.

[59] For instance, Ofwat used CPIH in its 2019 price review for water and wastewater service providers in England & Wales, while Ofcom used CPI to set price controls in its wholesale fixed telecoms market review for 2021-2026.

Consultation questions

Question 17: Do you have any views on our proposal to maintain CPI as the general inflation index for Network Rail's access charges (and payment rates in other mechanisms where we set the method of indexation)?

Annex 1: PR23 charges review indicative timeline



Annex 2: Summary of PR18 decisions on charging framework

ORR last reviewed the charging framework in PR18. Through this review, we simplified this framework by combining and removing some charges. We also amended the structure and scope of the ICCs levied by Network Rail. The key changes to the charging framework resulting from this review are summarised below.

Revising the fixed cost allocation methodology

One of the priority areas for the PR18 review of charges was improving transparency over Network Rail's fixed costs. We considered there was a low degree of understanding and transparency around the drivers of infrastructure costs; and the way fixed cost charges were allocated and levied from operators lacked cost reflectivity.

As such, Network Rail appointed Brockley Consulting to undertake a review of cost allocation and attribution approaches in the rail industry, and explore potential alternatives. This was an extensive piece of work and led to the development of a new methodology which implemented significant changes in the way that Network Rail allocated its fixed costs to train operators and funders. This methodology improved the overall cost-reflectivity of the FTAC, and overall transparency over the key drivers of fixed costs

The new fixed cost allocation methodology is set out in more detail in Annex 3. In our PR18 Final Determination, we decided to use this cost allocation approach as the basis for setting operators' FTACs in CP6.

Merging freight mark-ups

We first introduced a mark-up for some freight operators in PR08. This charge was then called the freight only line (FOL) charge. It recovered the long-run costs of operating lines that would close if freight services ceased to operate (e.g. segments of branch lines used only by freight traffic). In PR13, we introduced the freight specific charge (FSC) alongside the FOL. The FSC was based on total freight avoidable costs i.e. all network costs that could be avoided in the long-run by removing freight traffic from the network.

We levied these charge separately from the FOL in CP5, largely to preserve transparency over the impact of introducing a FSC during CP5. In order to simplify the overall charging framework, we combined these two charges in our PR18 charges review into a single ICC for freight services.

Extending mark-ups to open access operators

Prior to PR18, open access operators only paid variable charges and station charges. In PR18, we introduced a policy whereby potential new open access services on certain flows would be expected to make a contribution to fixed costs, through a new ICC. This was subject to the application of a market-can-bear test to determine which open access services can bear a charge. We developed a framework for this test and concluded, on the basis of this analysis, that services operating in the interurban market segment would be able to bear such a charge. We therefore levied an ICC on new interurban services.

Scrapping the capacity charge

Prior to PR18, all operators paid a charge on busy parts of the network to reflect the 'congestion costs' from adding services (the capacity charge). This was intended to provide operators with incentives to consider the impact on overall network performance caused by more intensive use of the network. We reviewed this charge in PR18 and decided to remove it on the basis that the incentive effects of the charge were relatively weak, and the way it was calculated did not closely reflect actual network congestion.

Scrapping the coal spillage charge

This charge aimed to reflect the cost to Network Rail of coal spilt on the network, to provide freight operators with an incentive to reduce spillage. In light of the significant decline of coal freight during CP5 – as well as its limited effectiveness, as the charge did not closely reflect the amount of coal actually spilt – we decided to remove this charge too.

Maintaining a cap on VUC rates for freight and charter operators

VUC rates for freight and charter operators were capped during CP5, to mitigate the impact of a significant increase in VUC rates that these operators would otherwise have incurred in CP5. We reviewed this policy in PR18 – taking particular account of EU and UK legislative requirements that directly incurred costs have to be recovered from operators, but that there can be time-limited capping / phasing-in of any increase in charges.

We decided that a cap on VUC rates should continue to apply to freight and charter operators, as they were forecast to incur material increases in their (uncapped) total variable charges in CP6 compared with CP5. We set the VUC rates paid by these operators based on a 10-year glide-path to full cost-reflectivity, over CP6 and CP7.

Annex 3: Network Rail's fixed cost allocation methodology

As part of PR18, Network Rail commissioned a review of its approach to allocating fixed costs to train services, for the purposes of setting FTACs. This review led to the development of a new fixed cost allocation approach which aimed to provide greater transparency over its costs and cost drivers, as well as improving the cost-reflectivity of the FTAC (i.e. so it more closely reflects the causes of costs in terms of different service characteristics or patterns of use).

This approach is set out in Network Rail's conclusions document on its methodology for allocating fixed costs to train operators in CP6. The key aspects of this approach are described below:

(a) Costs are allocated, where possible, to around 2,000 individual route sections. These are sections of the network along which the volume and mix of traffic is broadly constant for a given piece of track (e.g. there are no junctions). The costs of each route section are then allocated only to those train service groups which use that part of the network[60].

(b) Costs for each route section are then divided into three categories[61]:

(i) **Traffic-characteristic avoidable costs** are costs that would be avoided by amending the specific characteristics of traffic, such as speed or electrification. These costs are allocated only to train services with those characteristics. 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 the highest-speed services that run on that section[62].

(ii) **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

[60] Service groups are sub-sets of services provided by train operators, grouped broadly by location.

[61] The model also allocates central support costs which are incurred by Network Rail (e.g. HR, billing). It is assumed that the proportion of central support costs that are non-avoidable is equal to the proportion of total operating route costs that are non-avoidable. The remaining costs are then allocated to each train service group in line with their share of other avoidable costs.

[62] In total, there are six traffic characteristics used to allocate costs: speed; axle load; unsprung mass; curving class; electrification; and depot usage.

train service groups using each route section, based on their share of the total number of trains running on that route section.

(iii) **Non-avoidable costs** are those costs associated with assets required to facilitate minimum traffic levels (e.g. one train per day) and maintain the current connectivity of the network. These costs are allocated directly to funders, rather than to train service groups, and are therefore **not** recovered through FTAC. This reflects the fact that funders are largely responsible for specifying those locations connected to the rail network, through the franchising process and wider government policy. As such, these costs would not be avoided even if train operators materially changed their use of the network.

(c) The methodology then deducts other charges income and third-party income from each train service group's allocation of costs. Charges income is based on forecasts of operators' charges. Third-party income is treated in line with the relevant cost allocations for the assets that generate that income. For instance, property rental income from managed stations is deducted from operator allocations in the same way that managed stations costs are allocated to them.

This determines the total allocation of fixed costs to be recovered from each operator, net of grant income. This is the basis for operators' "pre-grant" FTACs.

Annex 4: Summary of consultation questions

Chapter 2 – ORR's proposed approach and priorities

Question 1: Do you have any views on our overall approach to the PR23 charges review, in light of the prevailing industry context?

Question 2: Do you agree with the initial proposals and areas for further work that we have identified? Are there other priority areas that we should seek to address?

Chapter 3 – Infrastructure cost charges

Question 3: Do you have any views on our proposal to use Network Rail's cost allocation methodology as the basis for allocating fixed costs to operators in CP7? Are there any elements of the methodology that you consider should be improved as part of this review?

Question 4: Do you have any views on our initial proposal to retain the FTAC for operators on concession-style agreements, on a fixed lump-sum basis (i.e. not to reintroduce the FTAC wash-up)?

Chapter 4 – Variable charges

Question 5: Do you support our proposal to retain the PR18 phasing-in policy for freight and charter operators, subject to further review later in the periodic review process?

Question 6: What, if any, additional evidence should we consider in our review of Network Rail's assessment of eligible costs to be recovered through the VUC?

Question 7: Do you have any views on the relative merits of applying VUC to Network Rail's engineering trains?

Question 8: Do you have any suggestions on how the VUC calculator could be improved, or other ways in which we could improve industry's understanding of the principles and evidence underpinning the calculation of the VUC?

Question 9: Do you have any views on the relative merits of a ring-fenced fund to incentivise on-train metering? How else could greater take-up of metering be incentivised?

Question 10: Do you have any views on our proposal to remove the PFM charging approach for EC4T?

Question 11: Do you have any views on our proposal to remove the loss incentive mechanism?

Question 12: Do you have any views on our proposal to make no changes to the EAUC in PR23, beyond recalibration?

Chapter 5 – Station charges

Question 13: Do you have any views on our proposal to calculate the LTC for large/complex franchised stations based on station-specific expenditure forecasts?

Question 14: Do you have any views on better metrics that could be used to allocate LTC-related expenditure between operators? What would the potential benefits and costs of these alternative metrics be, relative to the current approach?

Question 15: Do you have any views on our proposal to class stations that open within a control period as 'new' for a fixed five-year period from the date of opening?

Question 16: Do you have any views on the relative merits of making the QX fixed element a regulated charge for managed stations?

Chapter 6 – Inflation Indexation

Question 17: Do you have any views on our proposal to maintain CPI as the general inflation index for Network Rail's access charges (and payment rates in other mechanisms where we set the method of indexation)?

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