Periodic Review 2013 consultation on incentives – Network Rail's response

8 February 2012

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2. INTRODUCTION

2.1. Background

ORR published its first Periodic Review 2013 consultation in May 2011[1]. We submitted a response to that consultation in September 2011[2]. ORR's second consultation was published in December 2011, with a focus on incentives[3]. This document contains Network Rail's response to ORR's consultation on incentives.

2.2. Structure of this document

ORR structured its consultation around the following headings:

- understanding the PR13 objective;
- aligning Network Rail and train operators' incentives to increase efficiency;
- possessions and performance regimes;
- access charges;
- capacity utilisation incentives;
- Network Rail's financing arrangements;
- the incentive properties of opex and capex cost recovery; and
- other incentives.

ORR asked stakeholders to respond to a set of specific questions relating to each of these topics.

The following chapters are structured along the same lines as ORR's consultation and provide our responses to ORR's questions. In some instances, a number of important issues do not relate directly to ORR's questions. Several chapters therefore include an additional section where we have made further remarks.

On 9 January 2012, ORR held a public workshop to help inform its consultation. In addition to discussing the above topics, ORR described its ideas for devolution and route-based price controls. We have therefore included an additional chapter which describes our current position in this regard.

[1] Periodic Review 2013 first consultation, 25 May 2011. Available at: http://www.rail-reg.gov.uk/pr13/PDF/PR13-first-consultation-document.pdf.
[2] Periodic Review 2013 first consultation – Network Rail's response, 2 September 2011. Available at: http://www.rail-reg.gov.uk/pr13/PDF/pr13-first-consultation-nr-20110902.pdf.
[3] Periodic Review 2013 consultation on incentives, 14 December 2011. Available at: http://www.rail-reg.gov.uk/pr13/PDF/pr13-first-consultation-nr-20110902.pdf.

3. UNDERSTANDING THE PR13 OBJECTIVE

3.1. ORR's position

In its consultation on incentives, ORR summarised its position as follows:

- We are minded to continue with the objective for PR13 that we proposed in our May consultation. This was to: protect the interests of customers and taxpayers by ensuring our determination enables Network Rail and its industry partners to deliver or exceed all the specified outcome and output requirements, safely and sustainably, at the most efficient levels possible comparable with the best railways in the world by the end of the control period.
- We want to ensure that PR13 delivers outcomes and outputs that passengers, freight customers, funders and society value.
- We have considered the available evidence on this and suggest that we should use PR13 to help deliver:
    - passenger satisfaction;
    - freight customer satisfaction;
    - economic growth;
    - connectivity; and
    - environmental sustainability.
- Building on CP4, we recognise the need to ensure that Network Rail has key enablers in place to ensure sustainable delivery of outcomes over the long term. We propose the following as key enablers for CP5:
    - excellence in health and safety and risk control (as per CP4)
    - excellence in asset management (as per CP4)
    - effective supply chain management, including procurement and contract management; and
    - collaborative working across the industry.
- It is essential for us to understand the mechanism by which our incentives result in these outcomes. This involves understanding Network Rail's responses but also the response of Network Rail's customers, the TOCs and FOCs.

3.2. Summary of Network Rail's first response

In our response to ORR's first PR13 consultation, we stated that there needs to be a clear progression from high-level industry objectives, to the type of regulatory regime that best supports these objectives, and to measures that enhance the effectiveness of the regulatory regime.

3. UNDERSTANDING THE PR13 OBJECTIVE

We identified the high-level industry objectives that should underpin PR13 as:

- improving value for money and affordability of today's railway for both taxpayers and users; and
- contributing to the achievement of sustainable economic growth.

The key characteristics of the regulatory regime that will most effectively deliver these objectives were identified as:

- an output-based approach; and
- one that provides appropriate incentives.

We advised that the effectiveness of the regulatory regime could be enhanced by a number of measures that could be undertaken as part of PR13:

- Increased emphasis on 'competition' where appropriate, such as on-rail competition, contestability and transparency.
- The introduction of risk capital.
- Simplification of the current regulatory framework, with the aim of improving alignment of interest between Network Rail and our customers and suppliers. In particular, a flexible framework which supports the formation of alliances between ourselves and our customers, providing flexibility for the parties to determine tradeoffs between relevant output requirements and/or to agree mutually beneficial cost and revenue sharing arrangements, for example.
- Effective regulation, comprising a single safety and economic regulator with enhanced responsibilities and capabilities to oversee the entire sector, and with a focus on revenue generation in addition to cost saving.
- Contractual reform including the separation of rights to object to network and station change (which should be criteria-based) from compensation (which should be a fair reflection of costs).

With these in place, outputs and incentives can be developed to drive behaviours and responses that can deliver the proposed high-level industry objectives, as outlined above.

We stated that it is very important to adopt a principles-based approach to regulation in order to facilitate key outcomes. In particular, we highlighted:

- government focus on high-level outputs;
- industry focus on end-users (passengers and freight customers);
- industry ownership of solutions;
- network optimisation;
- whole-system optimisation;
- whole-life optimisation;
- investment to improve efficiency;

- innovation;
- bespoke arrangements;
- evolution of business structures by the industry to optimise efficiency; and
- growth through competition.

Outcomes and outputs

While we advised that we should be planning for outcomes, we can only sensibly commit to the delivery of outputs. User satisfaction provides an example of why we would be concerned with outcome-based regulation. Clearly, user satisfaction is a key outcome that should be measured, and there is industry recognition that action plans for improvement must be developed. However, there are some factors that influence satisfaction which are beyond the industry's control such as passenger fares policy, which impacts on price and the perceived value for money of the service. Therefore, we argued that while user satisfaction should be monitored, it should not be specified as a regulated target.

A variety of outputs may be valued by users, but placing equal incentives on them all simultaneously may increase the challenge of fulfilling any one particular output measure. We stated that too many regulated outputs will jeopardise the clarity of intent, add complexity of delivery and potentially increase industry costs. We therefore asserted that clarity of priorities for CP5 is very important, along with clarity of the consequences for non-delivery of outputs.

Metrics for monitoring outputs

In our first consultation response, we said that under the current regime, there is a need to constantly balance outputs such as punctuality, capability, journey time and frequency of service, for example. This requires important tradeoffs to be made. In principle, metrics could be specified for each of these although we believe that they would be imperfect and subject to variation which would result in distortions, especially since tradeoffs need to be made at many levels across several organisations.

Rather than develop increasingly more detailed metrics to monitor performance against output targets, we stated that there is merit in simplifying the current regime and creating better alignment of interest through a regulatory framework which supports alliance arrangements. This would provide flexibility to Network Rail and its customers to determine compromises which suit individual circumstances, recognising that it is not a case of 'one size fits all'.

Specific safety requirement

Safety is at the forefront of everything we do. We said that we do not consider that a specific safety target is required, given legislation should be sufficient by itself in requiring Network Rail to take action in this area. Work is currently taking place to improve safety culture within Network Rail.

3.3. Network Rail's current position

Responses to consultation questions

Q3.1 Do you agree that in PR13 we should focus on incentivising delivery of outcomes that customers, wider society and funders value?

We agree that ORR should focus on incentivising delivery of outcomes that customers, wider society and funders value in PR13.

In order that the package set by ORR appropriately incentivises the delivery of these outcomes, it is important that ORR understands what drives Network Rail at the strategic level. We are in the process of sharpening the clarity around our purpose, role and vision:

- **Purpose:** Network Rail exists to generate outstanding value for taxpayers and users by continually improving the railway.
- **Role:** Our role is to develop, maintain and operate rail infrastructure in partnership with our customers, suppliers and other stakeholders.
- **Vision:** A leading independent British-based infrastructure group that is internationally respected for providing rail transportation solutions that deliver outstanding value responsibly.

We would welcome working with ORR to seek to ensure that the objectives of PR13 are consistent with Network Rail's streamlined purpose, role and vision.

Q3.2 Do you agree with our assessment of the outcomes that customers and society value?

We agree with ORR's assessment of the outcomes that customers and society value, but consider that important tradeoffs exist between them. We discuss these tradeoffs in detail, and how ORR should design its regulatory mechanisms in light of them, in our responses to Q3.3 through to Q3.7.

Q3.3 How do you see the trade-offs between and within the interests of customers, funders and society? How do you see the trade-offs between current and future customers, funders and society?

We echo ORR's view that that there are important tradeoffs between the benefits enjoyed by customers, funders and society at large, and between generations. These tradeoffs have always existed. Recent control periods have witnessed significant improvements in performance, reductions in costs and a tightening of capacity. As

such, technical and economic constraints have come to bind our decisions and work programmes to an ever increasing extent. In CP5 therefore, the conflicts that Network Rail and the wider rail industry will face will be more acute than ever before.

It is of paramount importance that ORR takes these into account, both in its design of the overall regulatory framework and in the way it assesses us against the targets it sets. We note in particular that ORR expects that we deliver a railway which is 'comparable with the best railways in the world by the end of the control period'[4] – it is essential that ORR takes these tradeoffs into account in making its assessment against this vision. This also has crucial implications for the way in which ORR should incentivise outputs and outcomes, and we discuss these in detail in our response to Q3.4.

Before examining the issues around incentives, we highlight a small number of specific tradeoffs which should inform ORR's thinking during the periodic review, and buttress industry planning more generally.

Firstly, our emerging view is that significant gains in performance alone, beyond the improvements already delivered in recent control periods, are unlikely to make the best use of industry resources. Whilst performance should still be a priority in CP5, greater focus should be placed on other elements including passenger growth and reducing costs.

Secondly, the sharp conflict between the interests of current and future beneficiaries should not be under estimated, and relates closely to the way Network Rail is funded. We are mindful of the fact that current funders could be attracted to a financing approach which results in a lower funding requirement in the short term. However, we would emphasise that this would only affect the timing of funding rather than its overall level, and would urge caution in this regard. Further, it is imperative that the conclusions of PR13 keep open future financing options as these have the potential to deliver benefits to both future customers and funders. It is also important that ORR is consistent with regulatory precedent in its approach to financing Network Rail in order that a consistent message is sent to existing and future funders of UK rail infrastructure. We discuss these issues further in Chapter 8.

Q3.4

To what extent do you think we should measure and monitor the delivery of those outcomes and outputs we incentivise? What metrics should we use? To what extent is it practical and desirable to monitor delivery of outcomes at the local level?

Incentivising outputs and outcomes

ORR states that 'because outcomes tend not to be specific in nature, we set specific outputs that we believe are correlated to achieving the outcomes we want to achieve'[5]. We support this approach and reiterate from our first consultation response that while we plan for outcomes, we can only sensibly commit to the delivery of outputs.

[4] ORR, Periodic Review 2013 consultation on incentives, paragraph 3.2
[5] ORR, Periodic Review 2013 consultation on incentives, paragraph 3.16

It also is extremely important that ORR clearly sets out whether outputs are to be regarded as absolute or relative in nature. The issue here is whether we should be rewarded for achieving specified targets on a limited number of numeric performance measures, or for delivering a compelling overall package of outcomes.

We firmly believe that the regulatory regime will be most effective, both in terms of evoking powerful incentives and encouraging the best overall performance from Network Rail, if the outputs are interpreted relatively. As such, and recognising the tradeoffs described above, we should be afforded the flexibility to trade between our outputs within CP5. Naturally, this would be subject to a reasonable change control process, and we recognise that there would need to be considerable transparency about how tradeoffs are made, and we are keen to explore this further with ORR.

We consider that such an approach will have a number of advantages:

- **Efficient use of industry resources** – As emphasised above, in CP5 we will be bound by a number of technical and economic constraints so that tradeoffs between outputs and between outcomes are likely to be necessary. Working with our industry partners, we believe that we are well placed to determine which choices will make the most efficient use of limited industry resources.
- **Greater openness to high-reward strategies** – In its consultation document, ORR raises concerns that certain aspects of the regulatory regime make us more risk averse and less willing to engage in strategies or activities that could give rise to step-change improvements in the outputs and outcomes we deliver. A regime which focuses managerial attention on outcomes, rather than incentivising us to achieve every output, is an important enabler in this regard.
- **Flexibility to respond to changing circumstances** – The rail industry will undergo radical change during CP5. One of the main risks associated with any regulatory settlement is the possibility that circumstances will evolve within the control period. A framework permitting reasonable flexibility will allow us to respond appropriately to the shifting needs of the industry.

As we said in our response to ORR's first consultation, the imposition of too many outputs could jeopardise the clarity of intent, add complexity of delivery and potentially increase industry costs. We therefore believe that clarity on the main priorities for CP5 is very important, along with precise indications of the consequences of non-delivery.

We note that ORR is 'not currently sympathetic to arguments that we should apply incentives to Network Rail only in respect of those outcomes that are totally within the company's control'[6]. We recognise that many of the outcomes and outputs already in place, PPM for example, are beyond our sole control. However, ORR should take a cautious approach to specifying outputs that are beyond our control. In particular, it should guard against creating misalignments between costs and benefits in Network Rail's control, as this is likely to create perverse incentives.

Management excellence metrics

A particular issue is Network Rail's use of management excellence metrics. These are valuable tools which have historically assisted Network Rail in improving its management capabilities and are contributing towards increased cost efficiency and

[6] ORR, Periodic Review 2013 consultation on incentives, paragraph 3.47

improved outcomes. We consider that excellence metrics have a function in helping to measure progress by the company.

There is a potentially important role for ORR to understand excellence models relating to key competences for the business. In particular this can provide an additional source of heuristic challenge for the business itself. In a regulatory context, it can therefore facilitate an aspirational business-led dialogue with the company in relation to key enablers of longer term improvement. However, caution is required in using this approach to set rigid targets for particular metrics since a degree of flexibility is required to allow detailed plans to develop in response to emerging information. By contrast, where excellence models are used to develop longer term improvement plans it may be more useful for the company to be held to account for delivering the plan rather than a particular level of excellence as defined by such models.

Metrics

More generally, our view on the role of the metrics to be used during CP5 mirrors our view that we should be incentivised to deliver outstanding performance overall. Rather than developing increasingly detailed metrics to monitor performance against output targets, we consider that there is merit in simplifying the current regime and creating better alignment of interests through a regulatory framework which supports collaborative arrangements.

As noted above, we anticipate greater focus on elements other than performance, notably with respect to capacity and efficiency, during CP5. This will likely involve a commensurate refocusing on the metrics used.

On the specific issue of performance, we expect that PPM and cancellations and significant lateness (CaSL) will continue to be set as regulatory outputs during CP5, and we will publish these at a more granular level than in CP4. Our own experience, together with that of the wider industry, has been that these measures suitably capture the needs of customers and funders.

We believe that delay minutes will continue to be a useful metric for internal management decisions, for example around compensation arrangements and setting investment priorities. Delay minutes should not be specified as explicit regulatory outputs however, since they do not reflect passenger and funder requirements beyond PPM and CaSL. We note that targeting delay minutes will be associated with increased risk for Network Rail and the wider industry.

Monitoring outputs at the local level

Beyond formal outputs, we are charged with meeting the reasonable requirements of our customers. We take these requirements very seriously and they heavily influence our work, particularly at the local level. We believe that our commitment to fulfilling customers' requirements locally means that monitoring a large number of local outputs will not be necessary or beneficial.

Nevertheless, we recognise that in a small number of instances there may be merit in monitoring outputs at the level of the route. If this is to contribute effectively to outcomes, a considerable amount of work will need to be undertaken to establish which factors should be monitored. Such a consideration will need to take into account the practicalities and costs associated with establishing route-based measures.

To the extent that outputs are monitored and/or targeted at route level, it is extremely important that we have flexibility to trade strong performance on some routes against weaker performance on others, allowing us to exploit the 'portfolio effect' in the same way as in CP4 and earlier control periods. Put another way, the move towards route-based measures should not place unreasonable constraints on the way we work. The imposition of binding requirements on each route would generate considerable risk relative to the *status quo*, and place strong upward pressure on whole-industry costs. This need for flexibility between route outcomes is particularly important with respect to the way our costs and efficiency are assessed. We should be able to reallocate assumed efficiencies between routes as part of our delivery plans, albeit without affecting ORR's overall efficiency assumptions.

In addition, it will be necessary for the possibility of a reopener to be put in place in the case of catastrophic events affecting outputs at a route or national level.

Q3.5

What do you see as the key enablers for Network Rail's successful delivery of outcomes in CP5? How should we best measure Network Rail's performance against these enablers? How should we best incentivise these?

Flexibility and clarity of purpose

As described above, being given the flexibility to trade between outputs will be instrumental in permitting us to deliver CP5 outcomes. Moreover, as we stated in the Initial Industry Plan, clarity of purpose, alignment of objectives and common incentives are key enablers to the industry delivering better value for money and a more affordable railway.

Prevention rather than cure

Increased focus on operating costs at Network Rail and train operators may lead to less resilience in managing and recovering from incidents. We will have to focus more on prevention rather than cure of problems. It follows that an important enabler will be for us to improve our modelling tools to ensure that we can accommodate the growing volumes of passengers whilst maintaining performance and reducing costs.

New project delivery business

We are encouraged by ORR's recognition that the creation of a new project delivery business could 'provide valuable market testing and competitive pressure on Network Rail in respect of construction'[7]. We see this as an important enabler for delivery of outputs, but recognise ORR's concerns around incumbent advantage. If this initiative is to be successful it will be important to demonstrate that the market for delivering certain railway projects is genuinely contestable. We are committed to making sure that our new project delivery business competes for business on a level playing field with other potential bidders and we will put in place arrangements so that we can assure ourselves that this will be achieved. Network Rail recognises that it has both

[7] ORR, Periodic Review 2013 consultation on incentives, paragraph 2.35

licence and statutory obligations to not unduly discriminate and to compete effectively. We are committed to complying with these obligations.

Asset Information Strategy

As a capital intensive business, Network Rail's effectiveness is in part determined by our understanding of our asset base. Although a great deal of information is available, the number of disparate systems currently being maintained makes data integration across systems challenging. To address this, we have developed a comprehensive asset information strategy, primarily focussed on process change and data improvement and building on a number of existing core systems. The strategy will start delivering benefits in early CP5 and is an important enabler to drive improved efficiency.

Culture Change

Although Network Rail is an asset intensive business, ultimately our success will be driven by our people. Therefore another important enabler to improved efficiency is our programme to instil a radical culture change within the business. In addition to the safety culture change referred to above, devolution is one instance of this programme which is all about empowering the people best able to make decisions within the business.

Devolution

Devolution is also a key enabler of successful delivery of outcomes in its own right. It will permit decision making and management accountability at a local level, providing greater focus and responsiveness to the needs of train operators. It will enable greater effectiveness and efficiency to be delivered through collaboration and partnership with train operators. The creation of the devolved organisation is also designed to stimulate innovation and facilitate benchmarking across routes to identify and share best practice.

Alliancing

Network Rail and a number of operators have established co-operative agreements that align behaviours through shared incentives to work more closely together – the creation of alliances. We believe that alliances and bespoke arrangements will provide an effective means of increasing efficiency across the industry. This will be achieved by unlocking the costs inherent in the contractual interfaces and encouraging behaviours that are consistent with 'one team' rather than two contractual counterparties. Barriers and duplication between organisations will be removed creating new opportunities to outperform operating, passenger, asset and financial targets. The multilateral nature of the network means multilateral decision making remains a fundamental principle in the industry, and any alliance will work entirely within this environment.

Success in Control Period 4

We described above what we see as the appropriate role for management excellence models. These models are likely to be important enablers in CP5, and the

excellence trajectories set out in ORR's *Success in Control Period 4*[8] letter will remain particularly significant. These are:

- excellence in heath and safety culture and risk control; and
- excellence in asset management.

Q3.6 What do you see as the key features of the transmission mechanism? How do Network Rail's customers respond to changes in Network Rail's behaviour and how does this translate into the experience of end-customers and society? How should we take this into account in the design and implementation of our incentives?

We agree with ORR that Network Rail's Management Incentive Plan replicates the profit incentive that drives shareholder-owned companies to a considerable extent, and is a central part of the transmission mechanism.

We have recently commissioned an independent study which will explore the transmission mechanism further.

Q3.7 How do you think industry reform would affect the transmission mechanism? How do you think changes to franchise agreements would affect the transmission mechanism?

We await the findings of the independent report examining the transmission mechanism.

We consider that it is appropriate for government to pay the Network Grant directly to operators which would then remunerate Network Rail through higher fixed charges. We note, however, that any changes would have to be acceptable to government in light of current and future accounting rules.

Other remarks

Safety is at the forefront of everything we do. We would welcome a clear expression from ORR on how it sees safety fitting in the context of the high level regulatory framework.

ORR advises that it is mindful of the impact on PR13 of changes to the EU's First Railway Infrastructure Package (FRIP)[9]. We anticipate that there may be an EU-wide review of access charges in 2012 or 2013 as a precursor to possible infraction proceedings. We consider that it would be appropriate for ORR to do more, by way of

[8] Letter from Bill Emery to David Higgins, 1 March 2011. Available at: http://www.rail-reg.gov.uk/upload/pdf/nr-cp4-success-010311.pdf.
[9] ORR, Periodic Review 2013 consultation on incentives, paragraph 2.48

consultation or bilateral discussions, to insulate PR13 arrangements from challenge by the Commission.

4. ALIGNING NETWORK RAIL AND TRAIN OPERATORS' INCENTIVES TO INCREASE EFFICIENCY

4.1. ORR's position

In its consultation on incentives, ORR summarised its position as follows:

- Under the current industry structure, train operators are to a large extent protected from changes to Network Rail's fixed costs. By partially exposing operators to these costs, we consider that there are significant opportunities for train operators to help increase Network Rail's efficiency.

- We do not think that removing franchise operators' financial protections in relation to Network Rail's charges is the most effective solution, because the charges vary considerably according to changes in methodology and scale of the Network Grant.

- Instead, we propose a mechanism that would share Network Rail's efficiency outperformance and underperformance with train operators at the level of each Network Rail route. This would replace the existing efficiency benefit sharing mechanism.

- We also propose a mechanism by which train operators share a proportion of changes in Network Rail's operating, maintenance and amortised renewal costs as determined at subsequent periodic reviews.

4.2. Summary of Network Rail's first response

In our first response, we stated that we believe that there is considerable merit in allowing the industry to agree bespoke cost and revenue arrangements that suit the relationship in question, rather than mandating a standardised efficiency benefit sharing mechanism through train operators' TAAs.

We recognised the case for exposing TOCs to changes in our costs, but only to the extent that they can genuinely influence them and assist us in their reduction. This is particularly important if the industry is to embrace cost and revenue sharing arrangements at the local level.

We said that this is an important policy choice for the franchise authorities given the impact it will have on perceived risk during the franchising process.

4.3. Network Rail's current position

Responses to consultation questions

Q4.1 What are your views on our proposed principles for efficiency sharing arrangements between Network Rail and train operators? To what extent to do you think they will improve the incentives on train operators to work with Network Rail to reduce its costs?

We agree with ORR that there are significant opportunities for TOCs and FOCs to help reduce our costs. It is important that the regulatory regime encourages operators to support our drive to reduce costs, and promotes collaborative rather than adversarial relationships.

In CP4, ORR introduced the efficiency benefit sharing mechanism (EBSM) which shared our outperformance of regulatory efficiency assumptions with operators where they demonstrably assisted in that outperformance. However, the Department for Transport and Transport Scotland did not waive their rights to claw back revenue received through the scheme. To date therefore, the mechanism has had no significant impact on TOCs' behaviours. We reiterate the need for franchising authorities to allow TOCs to be exposed to our costs during CP5.

ORR is proposing a route-based efficiency sharing mechanism (REBS) during CP5. We continue to believe that bespoke arrangements would provide the most effective means of incentivising operators to help us increase our efficiency, but will engage constructively on the proposed mechanism. We consider that the principles of REBS proposed by ORR are broadly appropriate, but expect the incentive properties and requirements for demonstrating contributions to efficiency to apply consistently across parties (see our response to Q4.2).

Q4.2 What are your views on our proposed design of a route-based efficiency sharing mechanism, as described in chapter 4 and in Annex B? To what extent to do you think they will improve the incentives on train operators to work with Network Rail to reduce its costs?

We have a number of specific comments on the mechanism described in ORR's consultation, which we set out below.

Detail of the mechanism

Uncertainty around definitions has been a particular problem for the mechanism during CP4, especially with respect to the assessment of renewals and how re-profiling of investment expenditure is treated.

Further work is needed to establish how the mechanism will operate in practice, and we consider that the more complex route-based nature of the proposed CP5 mechanism increases the need for a clear set of definitions. The exact definitions and

means of calculating outperformance and underperformance need to be explained as a priority. For purposes of transparency, we suggest that the design and definitions of the mechanism are kept as simple as possible and should relate clearly and appropriately to definitions already in place. The definition of operators' outperformance should be consistent with the definition used for Network Rail's outperformance.

Inclusion of Schedule 4 and 8 payments and property income in the definition of efficiency

A particular definitional issue is whether Schedule 4 and 8 payments should be included in expenditure to be assessed as part of the mechanism. We strongly advocate their inclusion. A failure to include these would create a perverse incentive for operators to encourage Network Rail to reduce costs at the expense of performance. This is because operators would be sheltered from worsening performance by Schedules 4 and 8, but would benefit from increased efficiency via REBS. This would not only damage the incentive properties of REBS itself, but undermine the effectiveness of the Schedule 4 and 8 regimes. Exposing operators to the tradeoff between performance and efficiency, by including Schedule 4 and 8 payments in REBS, will encourage operators to balance the wider benefits and costs of their actions in their decision making process, and ensure the continued efficacy of the Schedules 4 and 8 as compensation and incentive regimes.

In its discussion of Schedules 4 and 8, ORR recognises the need 'to encourage train operators to work with Network Rail to help it improve performance and minimise the number and impact of possessions'[10]. A further advantage of including Schedule 4 and 8 payment rates in the definition of REBS efficiency is that it will sharpen incentives for operators to work with Network Rail in achieving these ends. We believe that this approach provides a more suitable means of encouraging such participation relative to reducing the payment rates of Schedules 4 and 8 (see also Chapter 5 of our response).

In addition, given our existing focus on generating revenues from property, we consider that the inclusion of property revenue in a sharing mechanism would be better suited to bespoke arrangements.

Symmetry of the mechanism

ORR's preferred mechanism is asymmetric, with a 25% share of the upside and 10% share of the downside attributed to operators. We consider that an asymmetric design is inappropriate and advocate a symmetric regime.

As a matter of principle, we strongly believe that all incentive mechanisms should apply fairly and consistently to each party subjected to them. We see no justification for the imposition of rules which provide preferential terms to certain parties, and consider that such a feature could undermine the credibility and incentive properties of the regime.

We are concerned that the asymmetric mechanism preferred by ORR is not financially neutral on average for either Network Rail or operators, and is associated with increased risk for Network Rail. We would require compensation at periodic review in order to offset the additional costs (including the imputed financial value of

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[10] ORR, Periodic Review 2013 consultation on incentives, paragraph 5.21

the additional risk) and these costs will have to be passed on to funders and customers.

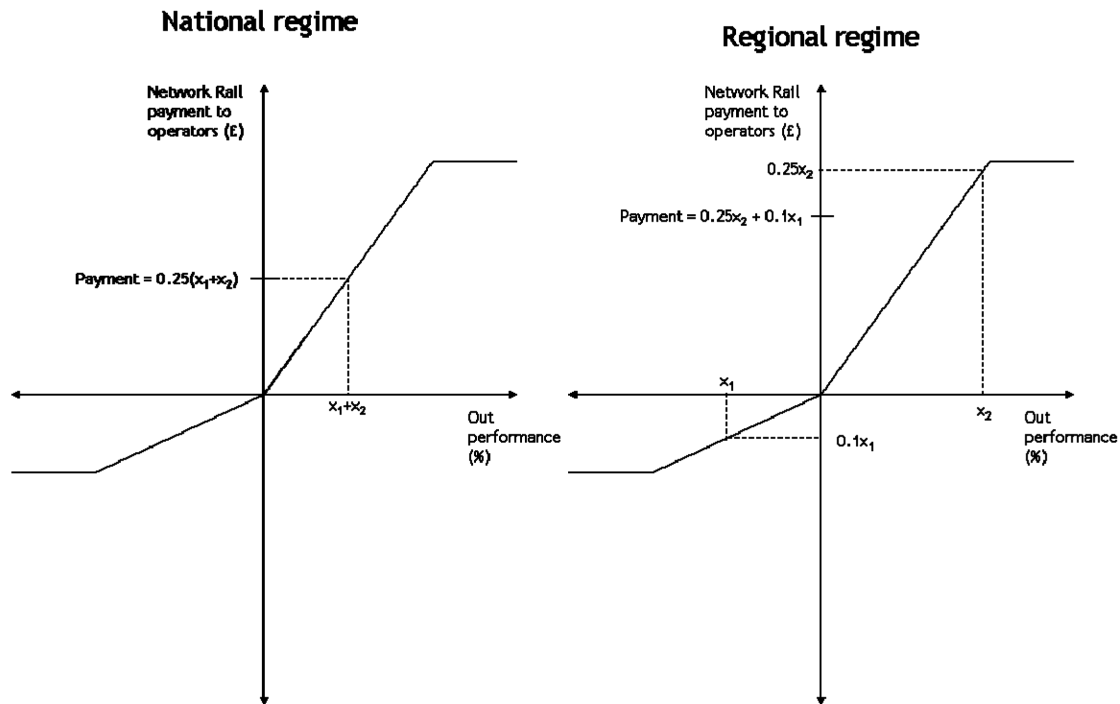
As we explain below, the asymmetric nature of ORR's preferred mechanism also interacts with the proposed regional structure of the regime to create further undesirable features.

Portfolio effect

Applying the asymmetric mechanism at route rather than company wide level will expose us to greater risk since we will be unable to offset the downside on some routes with upside on others. Based on its risk analysis, ORR has stated that it does not see this as a material issue. We are keen to better understand how ORR has reached this conclusion.

If the mechanism was symmetric, the linear nature of the incentive would permit us to offset out performing and under performing routes commensurately, regardless of whether the mechanism was national or route-based. However, the asymmetric regime will distort this possibility. It is helpful to compare the national and route-based regimes when the mechanism is asymmetric. Intuitively, under a national regime our performance would be measured as an aggregate across all routes (with routes weighted appropriately). We would pay out 25% in instances of overall outperformance, and receive a payment of 10% in instances of underperformance. In contrast, under the regional structure each route would be treated individually, with a payout of 25% on each out performing route and a receipt of 10% on each under performing route. By virtue of the asymmetric nature of the regime, a given outperformance on one route would not offset the same underperformance on another route, even if they were the same size. We would not be able to offset flows from under performing and out performing routes in the same way as under a national or symmetric regime. Figure 1, below, illustrates the argument diagrammatically assuming two routes of the same size, with the outperformance of route i denoted x_i.

Figure 1 – The portfolio effect



Relative to a national regime or a symmetric one, this will increase the expected value of our net payments and increase volatility of financial flows. We strongly believe that ORR should take this effect into account in the design of REBS.

Demonstrating contributions to efficiency

We welcome the proposed requirement for train operators to demonstrate to ORR that they have engaged with Network Rail to identify efficiency opportunities in order to receive payouts through REBS. However, we have two principal concerns around the conditions set out in the Annex to ORR's consultation which describe how train operators will demonstrate their contributions.

Firstly, we note that the level of detail required from operators for demonstrating engagement demands much less evidence than ORR is currently expecting from Network Rail in the form of positive management actions. As a point of principle, we strongly believe that the requirements should apply equally to all parties, and would expect this principle to be established as part of the mechanism in CP5.

Secondly, we are concerned that the conditions for demonstrating operators' contributions described in the annex are unlikely to be sufficiently well-defined to underpin a definitive *ex-post* assessment of operators' contributions to efficiency. In order to avoid the creation of perverse incentives and disagreements during CP5, more work should be undertaken to define the precise requirements for contributions.

Perverse incentives in instances of underperformance

We are concerned that the regime as described in the consultation could create a perverse incentive in instances of underperformance, whereby operators could argue

that they had not engaged with us in order to avoid sharing the downside. The mechanism should explicitly and unambiguously define how underperformance in particular will be attributed to operators.

Regional baselines

We expect ORR to issue the baselines for REBS in its PR13 determinations. We will produce delivery plans thereafter. We consider that it would be appropriate to adjust the REBS baselines in order to reflect our delivery plans during CP5.

Apportioning of outperformance and underperformance

We consider that ORR's proposal that the mechanism would apportion outperformance or underperformance on the basis of variable track access charges to be appropriate.

Q4.3 What are your views on our assessment of the role of bespoke arrangements? In what circumstances do you think bespoke arrangements are likely? What advantages and disadvantages might they bring? How should we best assess them? What are your views on the scope for excluding some of Network Rail's costs from the default efficiency sharing mechanism?

We welcome ORR's assessment of the role of bespoke arrangements and agree that they could supplement or replace the default REBS mechanism. The formation of alliances will facilitate a more collaborative working approach 'on the ground', and should achieve changes in behaviours across the industry.

We believe that a presumption in favour of bespoke arrangements should be established. Experience from the Wessex model and project-based alliances suggest that the parties involved need to agree and determine between themselves how the specifics of each alliance should operate. It is important that individual alliances have the flexibility to agree mutually beneficial arrangements, which suit the specifics of the relationship in question.

Bespoke arrangements should include the possibility of excluding some costs from the default mechanism, if doing so helps align incentives or contributes to the reduction of whole-industry costs.

Alliance payments

An important matter is how REBS payments will be calculated when Network Rail has formed alliances or bespoke deals with operators on a particular route. We will enter into alliances only in instances where we expect them to give rise to significant joint cost savings beyond those that could otherwise be realised. As we stated in Chapter 3, alliancing has the potential to release substantial additional cost savings. Alliancing arrangements should, therefore, benefit not only the parties subject to the alliance, but also non-alliance parties on that route through reducing our costs.

We consider that REBS payments should be calculated as follows:

- Route-based alliance debits or credits computed according to the rules set out under the alliance arrangements; and

- REBS payments calculated on the basis of route outperformance or underperformance *net of* route-based alliance debits or credits.

Since we will enter an alliance only if we believe it will give rise to cost savings that could not otherwise be realised, this approach will not place non-alliance parties at a disadvantage. The approach has a number of additional advantages. It provides a pragmatic means of ensuring that operators' rewards from helping Network Rail reduce its costs closely reflect their efforts, avoiding free riding, undue castigation and the creation of perverse incentives. Finally, it is simple and transparent, and avoids disputes around which cost savings are attributable to which parties and the associated complex calculations.

It may also be appropriate to make adjustments to alliance parties' REBS payments in order to avoid rewarding or penalising twice for outperformance or underperformance on costs within the alliance. In principle, it should be possible to deal with this as part of alliance agreements.

We agree with ORR that REBS payments should be computed and paid annually.

Q4.4

What are your views on our assessment of potential impacts of a route-based efficiency sharing mechanism, as described in chapter 4 and in Annex B?

We agree that a downside can be introduced to the mechanism without increasing risk to train operators substantially. We agree that the train operator downside mechanism reduces Network Rail's downside risk exposure.

ORR states that 'we consider that it would be appropriate to limit operators' exposure to changes in Network Rail's efficiency through explicit caps'[11]. We are keen to see ORR's analysis underpinning this position.

The risk analysis presented by ORR and described in Annex B provides a helpful starting point in the assessment of the likely impacts of REBS on operators and Network Rail. ORR has indicated to us that this work is illustrative in nature, and that further analysis will need to be undertaken to increase confidence in the results.

We note in particular that there are a number of sources of risk, affecting operators and Network Rail, which are excluded from ORR's analysis. We consider that the principal areas which merit further consideration by ORR are:

[11] ORR, Periodic Review 2013 consultation on incentives, paragraph 29

- **Relationship between cost sharing and cost reduction –** ORR has assumed a constant elasticity (or log-linear) relationship between cost sharing and cost reduction. Since the evidence around the nature and strength of this relationship is very thin, it would be appropriate to explicitly analyse the effects of different assumptions (functional forms and parameter values) on the outputs examined by ORR.

- **Choice of baseline –** The results depend critically on the use of an appropriate baseline. A major source of additional risk is the analytical uncertainty associated with a difference arising between ORR's baseline assumptions and the true mean of efficiencies. For example, if ORR sets the efficiency baseline above the mean, operators will on average be worse off and Network Rail will be better off than the analysis to date indicates (and vice versa).

We look forward to seeing further analysis from ORR and would be happy to support it in this work.

Q4.5 What are your views on our preliminary proposal for exposing passenger and freight operators to changes in Network Rail's fixed costs in subsequent periodic reviews?

We broadly welcome the proposals and consider them to be a potential means of better aligning Network Rail's and operators' incentives. They would give operators an incentive to engage further in reducing Network Rail's costs.

However, the detail of the proposed regime is unclear and a number of questions remain unanswered. A great deal of work will be required to develop the detail of the mechanism before it can be made operational. An issue which should be explored as a matter of priority is which costs will be included in the regime. For example, as a matter of principle, it would be inappropriate to expose operators to sunk costs or costs associated with incremental outputs demanded by government during the course of franchises. Rules will need to be established around which costs are included in any mechanism, and consideration given to the practicalities of computing these costs and assigning them to different parties. Future work should also pay special attention to the likely impacts on franchise values.

Other remarks

We agree with ORR that Network Rail sharing in operators' costs is likely to be complex to implement and has less merit than operators sharing Network Rail's costs. We agree that this should not be progressed as part of PR13.

5. POSSESSIONS AND PERFORMANCE REGIMES

5.1. ORR's position

In its consultation on incentives, ORR summarised its position as follows:

- We aim to ensure train operators receive an appropriate level of compensation for service disruption (planned or unplanned) attributable to Network Rail and other train operators. We intend to reduce the risk of any instances where train operators are over or under compensated for service disruption by updating payment rates so they reflect the latest evidence. We will also consider whether to introduce other measures such as introducing a time lag on Schedule 8 payments and reviewing whether Schedule 4 and 8 payment rates should be set below full compensation to encourage train operators to work with Network Rail to help it improve its performance and minimise the number and impact of possessions.

- Schedules 4 and 8 also have incentive effects. We invite stakeholders' views on whether we should place further incentives on Network Rail to ensure it fully takes into consideration the impact of service disruption on passengers, freight customers and society as a whole.

- The RVfM study highlighted the need for stronger alignment between train operators and Network Rail, for example, through joint ventures/alliances. In a more joined up industry there may be more instances where Network Rail and train operators wish to modify or replace Schedules 4 and/or 8 with bespoke possession and/or performance arrangements. We support this idea and are minded to approve such arrangements in cases where we are satisfied they do not undermine the incentives of Network Rail and train operators to work together to minimise service disruption.

5.2. Summary of Network Rail's first response

Schedule 8

In our earlier response, we welcomed ORR's underlying level of support for the regime, emphasising Schedule 8's role as a compensation mechanism for the impact of performance on revenue. We stated that the liquidated sums based approach remains one of the regime's strengths, and felt that this principle should be reinforced in CP5.

We argued that PR13 should focus on maintaining a simple and stable default regime at national level, with any significant amendments left to local alliancing discussions. Any network-wide changes to the regime would always need to be considered as part of a broader discussion about risk allocation and incentives, as many of the emerging suggestions would have a consequential impact on other parts of the contractual framework if done in isolation.

We envisaged recalibration of the Schedule 8 parameters being the dominant piece of Schedule 8 work within this review, with an emphasis on updating payment rates for the start of CP5 to accurately reflect the impact of performance on revenue. Discussion would also be required on other aspects of Schedule 8, notably the

Sustained Poor Performance mechanism, which we considered was not doing what was intended upon its introduction in 2006.

We suggested a number of additional aspects for refinement, with the shared aim of better aligning the commercial incentives of industry parties with the 'right thing to do' for the users of the rail network.

Schedule 4

We emphasised that there has been particular benefit in bringing all possessions-related compensation into one place in CP4. Within Schedule 4, scope remains for bespoke compensation in specific defined cases, and this has worked well.

As with Schedule 8, we argued that the liquidated sums based approach is right, particularly because the sums payable are a function of the timetable impact.

We re-emphasised the importance of price signals – we want the industry to feel comfortable that Schedule 4 continues to give Network Rail the right 'price signal' incentives to reflect the financial impact of disruption. This should drive any of the thinking around revisiting notification factors or compensation thresholds.

We supported the thresholds at which compensation can be 're-opened' ('Type 2' and 'Type 3' possessions, and Sustained Planned Disruption) and recommended that these remain in place, as there is currently an appropriate tradeoff between efficiency and accuracy.

We recognised the concerns around how Schedule 4 is currently funded and welcomed the possibility to resolve these through industry debate. However, we advised that we did not believe that a free possessions allowance would be an appropriate solution at a network-wide level.

5.3. Network Rail's current position

Responses to consultation questions

Q5.1

Do you think that the current possessions and performance regime broadly help to align incentives between operators and Network Rail in the best interest of customers, funders and society? If not, why not?

The regimes broadly align incentives, in most respects, between Network Rail and train operators. One exception is in relation to decisions by one party that affect the performance of the other. For example, the costs of spare trains or train crew are borne by train operators, but many of the benefits (in terms of better recovery from disruptive incidents) accrue to Network Rail via Schedule 8, creating perverse incentives at the margin.

Also, through the star model, Schedule 8 incentives are well aligned following an operator incident. In this case, Network Rail has a clear incentive to assist in service recovery because this minimises the impact on other operators, which would otherwise be compensated by Network Rail directly. However, operators do not have a similar incentive to assist with service recovery following a Network Rail incident.

The regimes do not explicitly align the interests of the industry with the wider interests of society, in that the payment rates reflect only loss of revenue and not the wider impact of disruption. However, as discussed below, it does not necessarily follow that changing the regimes to explicitly reflect this value would be the best way to improve outcomes.

Q5.2 Do you think it is appropriate to retain Schedules 4 and 8 as liquidated sums compensation regimes?

We believe that the liquidated sums based approach remains one of the key strengths of the Schedule 4 and 8 regimes. Through a 'swings and roundabouts' effect, over time it provides an appropriate level of compensation. This approach reduces the transaction costs which would be associated with bespoke claims and keeps the regime workable and practical.

We are keen to ensure that any amendments made in PR13 do not result in an increase in the volume of bespoke claims. PR13 should seek to reinforce the liquidated sums principle by increasing its role in compensating for changes in performance, specifically by removing performance-related compensation from the scope of Part G of the Network Code (in the same way that possession-related compensation has already been removed).

Q5.3 Do you think it would benefit customers, funders and society and encourage greater co-operation if Schedule 8 compensation rates from Network Rail to train operators did not reflect the full impact of possessions on revenue and costs? We also welcome any further views on this issue in relation to Schedule 4.

We would welcome any recognition that not reflecting full costs could form part of a bespoke deal. However, as per our first consultation response, we consider that, in the template regime, Schedule 8 (and Schedule 4) payment rates should accurately reflect the full impact of performance on revenue. The reasons for this include the potential effect, if payment rates were reduced, on operators' risk (particularly smaller operators) and on franchise values, and the incentive that would be created for operators not to agree to necessary possessions.

We also note that ORR views the Schedule 8 and 4 regimes primarily as *compensation* mechanisms[12], whilst recognising that they also have incentive effects. We support this view. A general move away from the current approach would undermine the ORR's stated rationale for the regimes.

As described in Chapter 4, an alternative would be to include Schedule 8 and 4 payments in the definition of REBS efficiency. This would encourage train operators to work with Network Rail to help us improve performance and minimise the number

[12] ORR, Periodic Review 2013 consultation on incentives, Box 5.1

and impact of possessions, whilst not undermining the rationales of the regimes. Moreover, this approach would not impact substantially on the risk faced by operators and Network Rail, since the effects would be contained within the REBS mechanism, with its *de minimus* thresholds and caps on payments.

Q5.4

Do you think existing incentives are as effective as they can be in ensuring that Network Rail and train operators perform at a level that is economically and socially optimal, and whether they sufficiently drive Network Rail behaviour? In particular, we invite views on whether we should place further incentives on Network Rail to ensure it fully takes into consideration the impact of service disruption on passengers, i.e. disruption above that already reflected in Schedules 4 and 8 compensation payments for loss of fare revenue, and how we could go about doing this.

We consider that the incentives currently in place to ensure that we take into consideration the impact of service disruption on passengers are sufficient. These incentives include not only Schedules 4 and 8 but also our regulatory targets, JPIPs, reputational incentives, and management incentives. The history of performance improvement since the societal rate was removed (in 2004) supports this view.

ORR indicates that there are situations where operators believe that local Network Rail management is not able to take the steps necessary to improve performance. Network Rail would be keen to learn more about the instances where operators believe this is the case, in order that we can take appropriate remedial steps.

If a further financial incentive were to be introduced, to reflect the impact on passengers (over and above that already reflected in Schedules 4 and 8), the logical mechanism would be the re-introduction of the societal rate. It would be important for the additional incentive to apply to both Network Rail and train operators (as was the case with the original societal rate). The proposal in the consultation paper appears to envisage the additional incentive applying only to Network Rail, which would immediately create a substantial misalignment of incentives with train operators.

Several other issues would also need to be considered in the design of any further financial incentive:

- It would be important for the incentive to reflect a reasonable estimate of value to passengers – the description of the potential incentive as 'punitive'[13] is misleading and unhelpful. A 'punitive' payment rate may well create a stronger incentive but not necessarily the right one to drive desired behaviours.

- A further incentive on performance would also exacerbate the existing mismatch between the financial incentives on performance and the (lack of) financial incentives on other outputs, in particular journey time.

- Whether the incentive had any upside. If not (i.e. it were a downside-only incentive), then this would create an expected cost to Network Rail, which would need to be funded in some way (e.g. through an access charge supplement). If there were an upside, this might raise questions of affordability: would funders want, or be able, to enter into an open-ended commitment to pay for further performance improvement?

Network Rail welcomes ORR's view that permitting train operators to withhold track access charges is not the right way forward, on the basis that this would effectively be a mirror image of the existing Schedule 8, requiring systems changes and contractual change but without actually achieving any meaningful change to the economics of the regime.

Specific comments on Schedule 4

The current notification discount structure of Schedule 4 provides a large incentive on Network Rail to plan early, as there is a large step between the size of maximum and medium discounts. PR13 needs to consider whether this is the message that the industry wants the Schedule 4 regime to give to Network Rail. There is evidence from PR08 to suggest that the current levels of maximum and minimum notification discounts are set at an appropriate level to reflect levels of passenger awareness and therefore the impact of disruption on operator revenue. However, the medium discount is simply set at the mid-point between the two. There would therefore be scope to alter the incentive effects of Schedule 4 by resetting the size of the medium discount accordingly.

The recent changes to Part D might also permit renewed discussion about the appropriate qualifying criteria for different notification discounts. However, before considering any potential change in this area, the industry should be mindful of the ongoing work of the Industry Access Planning Improvement Programme (IAPIP) which might enable additional improvements to the timetabling process at a later stage, enabling further development of Schedule 4 mechanisms.

[13] ORR, Periodic Review 2013 consultation on incentives, paragraph 5.29

Q5.5

Do you envisage any barriers to modifying or replacing the Schedule 4 and 8 regimes in cases where both a train operator and Network Rail wish to? What do you see as the advantages and disadvantages of bespoke approaches? Do you agree with our proposal regarding the circumstances when we will approve bespoke Schedule 4 and 8 arrangements?

Network Rail welcomes ORR's indication that it is minded to approve bespoke agreements in certain cases. Whilst the detail should be left to individual discussions, proposals for any modified regimes will need to be backed up by evidence that there will be no adverse impacts on other operators, either operationally or commercially.

We agree that, given ORR's approval role, its Criteria and Procedures could usefully set out fundamental principles that ORR would expect the parties to have considered. This is an effective way of preparing for the possibility of bespoke regimes, without actually dictating what a bespoke regime might look like.

Other remarks

As a general observation, we support the principle that both Schedules 4 & 8 regimes should be kept simple, underpinned by a liquidated sums approach. It is important for all industry parties to accept that neither regime will compensate accurately in every isolated case - we maintain that over time they both provide an appropriate level of compensation and broadly the right incentives.

While supporting the incentives principle and the usefulness for the industry of Network Rail being given the right price signals, we also reemphasise the point (from our September response) that Schedule 4 needs to be taken into account when comparing Network Rail's project delivery costs to those of infrastructure managers elsewhere, which do not operate similar regimes. Schedule 4 represents an additional cost to Network Rail, either through the compensation itself or through the additional work costs incurred as a result of increased night-time or weekend working, when access is less restricted.

Recalibration

We agree with ORR's general position that, rather than radical reforms, the periodic review should focus on updating the metrics of the regimes so that they reflect present circumstances. We welcome the intention to undertake a full recalibration of Schedule 8 parameters and will contribute to this work through the technical group currently being set up.

We re-emphasise the importance of securing full industry support for the approach to the recalibration exercise, and for the results of the work, in order to avoid the risk of disruptive revisiting of data during CP5. Reducing the scope of paragraph 17 of Schedule 8 for making mid-term changes to parameters would create greater incentives for parties to engage at the recalibration stage. This would improve the quality of the data for the start of CP5, and reduce transaction costs during CP5. Paragraph 17 should return to being the recourse for data quality issues caused by material changes to train services.

Lagging payments

We welcome the discussion around introducing a lag on Schedule 8 payments, but note that this does not alter the underlying economics of the regime and will not change the value of payments in the long run. If a time lag were to be introduced, in order to not cause prolonged disputes, the Day 42 statement process should remain unchanged, with only the actual payment taking place later.

Part G

We note that, in the list of issues to be considered as part of the review (Table 5.5), Network Rail's proposal to remove performance-related compensation from the scope of Part G of the Network Code has not been included. We would like to understand whether ORR proposes to consider this in the review.

Funding Schedule 4 – Access Charge Supplements

We welcome the inclusion of this in the review.

Managing extreme disruption

(1) Sustained Poor Performance (SPP) – Schedule 8

We welcome the opportunity to review the SPP threshold within Schedule 8 which addresses extreme performance disruption over a long period. As set out in our September response, we believe that the present SPP threshold (10% of benchmark) is set too tightly, which has contributed to the trend towards an increasing number of bespoke claims, undermining the effectiveness of the liquidated sums based regime.

(2) Sustained Planned Disruption (SPD) – Schedule 4

We believe that the design of the SPD threshold, being a quantitative evidence-based mechanism, has reduced the number of compensation-related disputes compared to previous control periods. We are therefore content for it to remain in place, albeit with some simplification of the contractual wording, as suggested in our September response. If there were an appetite to redesign the SPD mechanism, we would emphasise the need to ensure that it remains based on quantifiable and realistically measurable definitions of disruption.

(3) Joint Restrictions of Use – Schedule 4

We welcome ORR's recognition that it is important that parties are not perversely incentivised against doing the right thing, particularly around running a realistic timetable during extreme weather conditions. We welcome ORR's intention to review the possibility of implementing a Joint Restriction of Use into Schedule 4, as we feel that this would be the right kind of mechanism for addressing the concerns previously identified by ourselves and others.

Other issues identified in ORR's consultation

We welcome the intention to establish principles for on/off network delay, as we believe this will become more significant in CP5 and beyond, particularly once Crossrail begins operating.

5. POSSESSIONS AND PERFORMANCE REGIMES

We welcome ORR's decision to not progress the kinked payment rates, changes to the capping regime, links between Schedule 8 and delay/repay, and differing structure for different types of operator. Some of these matters could be reserved for local discussions about bespoke regimes.

In our September response we also suggested a number of further areas for the review agenda, mostly minor changes to contractual provisions to reflect actual practice and correct historical inaccuracies, thereby eliminating uncertainties and scope for disagreements. It is our understanding that any matters not explicitly ruled out remain on the agenda of the technical group.

6. ACCESS CHARGES

6.1. ORR's position

In its consultation on incentives, ORR summarised its position as follows:

- Access charges play a key role in the interface between Network Rail and its customers. Their level and structure has a significant effect in driving behaviour.

- Track access charges and regulated station charges are currently determined by us for the entire control period, and are calculated using default models that have been audited and approved.

- We can envisage circumstances in which charges calculated on a bespoke basis may be more appropriate, and we suggest some principles to which the bespoke charges should adhere.

- More bespoke arrangements might not lend themselves to periodic determinations by us. We consider how such arrangements might be dealt with in future periodic reviews, with a view to proving greater flexibility.

6.2. Summary of Network Rail's first response

We did not discuss bespoke access charging arrangements in detail in our response to ORR's first PR13 consultation. However, in our discussion of further issues for consideration, we noted that bespoke deals could be a key enabler for change. We also highlighted aspects of the current regulatory framework, such as inflexibility, that could hinder or block the industry's reform agenda.

In respect of the capacity charge, we stated that further disaggregation would introduce complexity and that there are considerable merits in retaining a relatively simple charging regime, on top of which bespoke arrangements could be placed.

We also discussed bespoke charging arrangements, in respect of the VUC, in our response[14] to ORR's consultation on vehicle modification[15]. In our consultation response we:

- Stressed the benefit of having a single charging regime across the network to aid consistency, noting the importance of having a sufficient degree of flexibility within the regime.

- Stated that ORR should not close out options such as bespoke deals substituting track access charges.

- Agreed that there is a need for bespoke deals to be transparent and not unduly discriminatory.

- Strongly supported ORR consenting to an alternative approach to approving VUC rates.

[14] Letter from Peter Swattridge to Rupika Madhura, 26 May 2011. Available at: http://www.rail-reg.gov.uk/upload/pdf/variable-usage-charges-nr-260511.pdf.
[15] ORR, Consultation on the policy on variable usage charges for modified vehicles, 6 April 2011. Available at: http://www.rail-reg.gov.uk/upload/pdf/variable_usage_charge_060411.pdf.

- Supported preserving VUC discounts in CP5.
- Proposed that it maybe appropriate for Network Rail to remunerate an operator for an initial investment to facilitate a vehicle modification, instead of charging a reduced VUC.

6.3. Network Rail's current position

Responses to consultation questions

Q6.1
In what circumstances do you think bespoke charging arrangements are likely to occur? What advantages and disadvantages could such arrangements have? How might they work for or against the alignment of incentives?

The examples included in ORR's consultation[16] appear to provide a reasonable range of examples where it could be appropriate to adopt bespoke charging arrangements. In our response[17] to ORR's vehicle modification consultation we stated that bespoke charging arrangements may be suitable where the VUC model does not accurately capture the cost savings from a particular vehicle modification on a particular route. We also suggested that where operators are not able to finance the upfront costs of vehicle modification, it may be appropriate for Network Rail to remunerate the operator for the initial investment, instead of charging a reduced VUC. We continue to believe that in both of these situations bespoke charging arrangements could be appropriate.

However, as a point of principle, it is not appropriate to try to predict every scenario where bespoke charging arrangements are likely to occur. Rather, it is important that the regulatory framework is sufficiently flexible to accommodate bespoke charging arrangements, when it emerges that these are appropriate.

We note that bespoke charging arrangements will be particularly important in the context of industry reform and should be encouraged where there are real industry cost savings to be made. They have the potential to better align incentives between Network Rail and train operators and deliver efficiency improvements that reduce industry costs. For example, where the VUC model is not sufficiently sophisticated to reflect a vehicle modification that reduces track wear and tear costs, a reduction could be agreed through a bespoke charging arrangement. Absent the ability to agree bespoke charging arrangements, vehicle modifications and other initiatives that reduce industry costs may not be progressed.

Potential disadvantages of bespoke charging arrangements could arise if an unduly bureaucratic approach is adopted in respect of assessing and approving them, resulting in administration costs that erode the potential benefits. To avoid this, any set of high-level principles should be clearly defined and predicated on a presumption in favour of bespoke charging arrangements.

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[16] ORR, Periodic Review 2013 consultation on incentives, paragraph 6.24
[17] Letter from Peter Swattridge to Rupika Madhura, 26 May 2011

Q6.2 What protection do you think might be needed for third parties not included in the scope of a bespoke arrangement?

Although we strongly support bespoke charging arrangements, we are also mindful of the potential impact of these arrangements on third parties. The development of a set of high-level principles against which bespoke charging arrangements can be assessed could be a suitable way of protecting the interests of third parties. We stated in our response to ORR's vehicle modification consultation that we believe bespoke charging arrangements should be transparent and not unduly discriminatory against other rail users.

Q6.3 Do you agree that it would be helpful for us to set out a set of principles on the basis of which we would decide whether to approve bespoke arrangements? Do you have any views on what those principles should be?

We support the development of a set of high-level principles that ORR would apply when deciding whether to approve bespoke charging arrangements. As noted above, a set of principles could be a suitable way of protecting the interests of third parties. Further, we consider that principles should be:

- clearly defined;
- include transparency;
- avoid undue discrimination; and
- be agreed between the parties.

However, the very nature of bespoke charging arrangements means that it is difficult to predict all of the different scenarios where there could be merit in introducing them. Therefore, it is very important that any criteria provide as much flexibility as is reasonably possible in order not to foreclose bespoke charging arrangements that have the potential to reduce industry costs. As noted above, we consider that any set of high-level principles should be predicated on a presumption in favour of approval in order to reduce administration costs and better align incentives between Network Rail and operators.

Q6.4 How do you think we should treat bespoke charging arrangements that might span Network Rail control periods or change within control periods?

We do not consider that bespoke charging arrangements should be subject to the same treatment as other access charges (i.e. set as part of the periodic review

process every 5 years) as a matter of course. Instead, it should be up to the parties subject to the bespoke charging arrangements (e.g. Network Rail and operators) to establish the duration of any arrangements and appropriate points in time at which to review these arrangements. If ORR has concerns in relation to the proposed duration and review procedures agreed between the parties, it could discuss these in more detail at the approval stage.

In our response to ORR's vehicle modification consultation we supported preserving for CP5, in absolute terms, any VUC reduction realised by operators as a result of 'track friendly' vehicle modifications. We noted that failure to preserve the VUC reduction would undermine operators' business cases to undertake vehicle modification because VUC rates would be subject to change as part of the periodic review process. This example illustrates quite well why it would not be appropriate to adjust bespoke charging arrangements as a matter of course as part of the periodic review process.

Furthermore, if bespoke charging arrangements were reviewed as a matter of course as part of the periodic review process, we consider that it could blunt the incentives that Network Rail and operators face to agree bespoke charging arrangements towards the end of a control period.

Other remarks

ORR highlights potential geographic disaggregation of the VUC as a key charging policy option discussed in its first consultation[18]. It notes that Network Rail is asking for clarity on this issue and that it will announce when it is concluding on this matter in early 2012. For the avoidance of doubt, Network Rail continues to strongly oppose the geographic disaggregation of VUC rates in CP5. VUCs should continue to be set at a GB-wide level because the relationship between traffic and cost is the same in different parts of the country. It only varies according to the lifecycle of the asset, the intensity and nature of use. Furthermore, setting charges at a national level maintains simplicity for train operators and eases interoperability between routes. It would also avoid costs associated with upgrading the Track Access Billing System, and avoid potentially introducing perverse incentives where it is cheaper to operate on busier routes. Geographic disaggregation of VUC rates is also likely to have a negligible impact on operator behaviour. In CP5, franchisees will not have the flexibility to move trains from one Network Rail operating route to another and avail themselves of different VUCs. Moreover, setting VUC rates at a GB-wide level would not prevent benchmarking between routes on the basis of route costs, unit costs by route, and overall revenue requirement. It is important that we get early certainty on this issue in order to progress, in more detail, our work on CP5 VUC rates.

We welcome the fact that ORR considers that bespoke arrangements could provide a valuable way of better aligning incentives between Network Rail and operators and, in general, is keen to facilitate such arrangements[19]. We agree that bespoke charging arrangements could make a significant contribution to better aligning incentives, particularly in the context of industry reform.

We support ORR's view[20] that it should continue to set charges using price lists so that if either party does not wish to enter into bespoke charging arrangements, an 'off-the-shelf' alternative would be available. For the avoidance of doubt, it is

[18] ORR, Periodic Review 2013 consultation on incentives, table 6.2
[19] ORR, Periodic Review 2013 consultation on incentives, paragraph 6.26
[20] ORR, Periodic Review 2013 consultation on incentives, paragraph 6.27

important that both parties consent to bespoke charging arrangements in order to avoid operators ‘cherry-picking’ instances where bespoke charging arrangements give rise to a lower rate than the default charge.

We note that ORR considers Network Rail financing vehicle modification to be a matter best dealt with separately from charges, for example, through the Investment Framework[21]. Although we consider that the Investment Framework is an important tool for financing capital expenditure, we believe that ORR should be open to other options, including Network Rail financing vehicle modification and bespoke charging arrangements substituting track access charges. It would be premature for ORR to close out, as part of PR13, financing options that could facilitate investments that reduce industry costs.

ORR states that, in accordance with EU legislation, track access charges are calculated on the basis of costs directly incurred. Further, it highlights that mark-ups are permitted to be levied on these charges, provided such mark-ups do not exclude the infrastructure operators who can pay at least the costs directly incurred plus a rate of return. We note that whether the fixed track access charge is a true mark-up in the opinion of the EU is likely to be an issue of challenge from the Commission and a clear route for its establishment in law and demonstrable research that the market segments ‘can bear’ the costs should be established as part of this process. Consideration also needs to be given to mandatory discounts imposed by EU legislation for ERTMS equipped vehicles.

ORR suggests that as part of a recast of the First Railway Infrastructure Package, the European Commission is proposing that charges be set for a minimum period of a number of years (potentially three), and bespoke charging arrangements would have to be compliant with the requirements in this area[22]. We are not aware of any proposed changes in the recast of the First Railway Infrastructure Package that would limit the length of any contract. New article 42 of the general approach notes that framework agreements can be for one timetable period or more and paragraph 5 states that infrastructure managers can agree shorter or longer periods than 5 years. The key to the recast text is transparency and clear frameworks of principles that need to be consistently applied, not necessarily the actual level of charges. These can be made clear on an annual basis in the Network Statement, which can be changed every year but which the recast states should include changes decided or foreseen in the next 5 years if available.

In the context of VUCs for modified vehicles ORR notes that the VUC model takes into account a number vehicle characteristics that influence track damage, including speed, weight, curving class and unsprung mass. It should be noted that EU legislation is likely to provide a tighter specification on what can be included in this model.

[21] ORR, Periodic Review 2013 consultation on incentives, table 6.30
[22] ORR, Periodic Review 2013 consultation on incentives, paragraph 6.28

7. CAPACITY UTILISATION INCENTIVES

7.1. ORR's position

In its consultation on incentives, ORR summarised its position as follows:

- Network capacity is a limited resource and it is important that we incentivise its efficient allocation and usage.
- The incentives framework determined as part of PR13 has the potential to have a major influence on how rail infrastructure capacity is used.
- We will review the volume incentive, which is the incentive for Network Rail to accept extra traffic onto the network. We propose to disaggregate it by Network Rail route.
- We continue to support the rationale for the capacity charge, which reflects costs associated with reactive delay.
- We do not intend to consider an option for Network Rail to share train operators' revenue further as part of PR13.
- We are not minded to proceed with a reservation charge as part of PR13, though are conducting further research on path utilisation to confirm our view.
- We will research the extent to which infrastructure capacity is under-utilised before deciding whether to act to develop indicators to monitor capacity utilisation.
- We welcome views, additional to those already expressed in responses to our May consultation, on the policy we are considering further to levy a charge to incentivise better use of capacity.

7.2. Summary of Network Rail's first response

Volume Incentive

In Network Rail's response to ORR's May 2011 consultation, we said that there are a variety of ways to make the Volume Incentive more powerful. They are: increasing the incentive payment rates; making payments to Network Rail within the control period; disaggregating the Volume Incentive by route; combining the Volume Incentive with the Capacity Charge; and/or considering it in the context of potential cost and revenue sharing arrangements with train operators. Network Rail did not support exposing Network Rail to the downside as well as upside risk associated with traffic levels.

Revenue Sharing Arrangements

In our response to ORR's May 2011 consultation, we said that we support bespoke cost and revenue sharing arrangements that are not mandated by TAAs, and that the focus of PR13, in relation to cost and revenue sharing, could be on agreeing a set of high-level principles for these arrangements, as discussed above.

Capacity Charge

In Network Rail's response to ORR's May 2011 consultation, we said that we support a simple Capacity Charge, and that further disaggregation would introduce additional and unnecessary complexity[23]. We support a simple recalibration of the charge where possible. Bespoke arrangements could be placed on top of the simple charge if necessary.

Network Rail is currently looking at ways in which the Capacity Charge can be recalibrated, and plan to consult on initial proposals in summer 2012.

Reservation Charge

In the same response, we said that we would support the introduction of a reservation charge if the industry aim is to encourage more on-rail competition. We said that a Reservation Charge should be considered alongside the work to reform Part J of the Network Code, and that the scale of the issue should first be identified, (i.e. we must first establish whether hoarding of rights is a material issue).

Scarcity Charge

In the same response we said that we would support a charge to incentivise better use of capacity if the industry aim was to actively encourage more on-rail competition. However, we believe that it would be inappropriate to levy a Scarcity Charge on parts of the network that are not full.

7.3. Network Rail's current position

Responses to consultation questions

Q7.1

What are your views, additional to those set out in your response to our May consultation, on our treatment of the following options:

(a) The scope of our proposed review of the volume incentive, including disaggregation by Network Rail route and consideration of a down side as well as an upside?

We continue to support proposals to improve the Volume Incentive. In addition to the points made in our response to ORR's May 2011 consultation, we agree that disaggregating the Volume Incentive by route is one way to increase its efficacy. This however may not be straightforward in practice. Network Rail should play a key role in determining how the Volume Incentive targets are disaggregated. We support the disaggregation of the calculation of Volume Incentive payments, by Network Rail route for example, for the purposes of transparency. However, we believe that Network Rail should decide the most appropriate way to manage the resulting payments or receipts (i.e. it should not be assumed that they will be automatically allocated to the relevant route). As with REBS, this will allow us to exploit the

[23] Disaggregating the charge by strategic route section would result in large number of different rates.

'portfolio effect', permitting us to offset underperformance on one route with outperformance on another whilst continuing to achieve aggregate outcomes.

In our response to ORR's May 2011 consultation, we were reserved about exposing Network Rail to the down-side as well as up-side risk associated with changes in traffic levels. On reflection, we consider this may be a good opportunity to further strengthen the Volume Incentive, and we believe that any exposure to the down-side risk should be symmetric to the exposure on the up-side. Indeed we consider that the design on the symmetry (or otherwise) of the Volume Incentive should be consistent with the design of the REBS mechanism[24].

We wish to reiterate the points made in our response to ORR's May 2011 consultation, that making Volume Incentive payments within the control period may strengthen the incentive. We believe that the incentive properties may be dulled by the current arrangements, where incentive payments are made as a cash adjustment at the beginning of the following control period[25] (in a similar way to that of a RAB addition). An alternative may be to include incentive payments in our financial performance measures, meaning that accommodating additional traffic would be recognised within Network Rail as outperformance, which may further strengthen the incentive mechanism. The current mechanism of payment and financial performance means that the Volume Incentive is not effectively transmitted within Network Rail.

We note that one of the four components in the Volume Incentive is passenger train miles, which do not vary with the capacity of trains. We would suggest that ORR considers amending this to vehicle miles so as to reward the use of longer trains.

(b) That we continue to support the rationale for the capacity charge, and will support Network Rail in its work to revisit and recalibrate the charge for PR13?

We have no additional points to make on our position on the Capacity Charge. We are aiming to consider the issues and options for recalibration of the charge, and consult on our proposed methodology in summer 2012.

We agree that in some cases, the aggregated level of the Capacity Charge means that it may not correctly reflect the associated direct costs. ORR makes this point in its consultation[26], and we consider that there are 'swings and roundabouts' and that there may also be cases where the Capacity Charge is lower than the associated direct costs.

On the particular example of the Centro project to upgrade the Coventry-Nuneaton line, we are in discussions with Centro as to how we may be able to resolve this issue after carrying out more analysis to understand the real performance costs of these additional services.

[24] For further information on our position on REBS, please see Chapter 4.
[25] This is because the Volume Incentive payments may be 'clawed-back' through periodic review settlements.
[26] ORR, Periodic Review 2013 consultation on incentives, paragraph 7.47

In its consultation[27], ORR stated that current Capacity Charges are levied for passenger services by service group They are in fact levied by service code, although we recognise that in many instances the same rate is applied to multiple codes.

(c) That we should establish the extent to which infrastructure capacity is under-utilised before proceeding to develop one or more indicator by which to monitor capacity utilisation?

Establishing the extent to which infrastructure capacity is under-utilised

We agree that the starting point in this area should be to identify whether there is a problem. As ORR's December 2011 consultation document states 'low levels of capacity utilisation are only an issue if there is passenger or freight customer demand for additional services'[28]. Defining the problem, in terms of 'low' levels of capacity utilisation, requires some way of measuring capacity utilisation to already be in place.

We think that it may be useful, when identifying whether there is a capacity utilisation problem, to 'unpack' this. We consider that the real question is whether there are parts of the network on which there is demand for additional services, but they are not being run, despite the fact that they could be accommodated (without unacceptable impacts on other services).

We suggest that, as a first step in confirming whether a significant capacity utilisation problem exists, ORR reviews the responses to its December 2011 consultation. This will establish whether stakeholders (and particularly train operators or funders) have aspirations to run services that they believe could be accommodated in this way, but currently are not.

Network Rail recognises that there are parts of the network on which there is demand for additional services. The Route Utilisation Strategy (RUS) programme provides many examples of this, as does the demand for paths on key routes such as the ECML and WCML in the context of track access applications. Analyses for the RUSs and track access applications, have demonstrated that, on much of the network, additional services can only be accommodated on the existing infrastructure at the expense of increased performance risk, and/or by making significant changes to existing services. In some cases this performance risk, and/or the required changes to services, may be unacceptable (when assessed using funders' appraisal methodologies). Indeed, changes to existing services may conflict with existing access rights. For these reasons, significant increases in services on most parts of the network tend to happen as part of major timetable changes, which are planned several years ahead. These are aligned with opportunities to change access rights (and with infrastructure enhancements where relevant).

We do not consider that there is a widespread problem of demand not being accommodated where there is in fact spare capacity to do so. We would be interested to understand whether train operators or funders believe that this problem exists and, if so, on what parts of the network.

Indicators to monitor capacity utilisation

[27] ORR, Periodic Review 2013 consultation on incentives, paragraph 6.24(d) – footnote 69.
[28] ORR, Periodic Review 2013 consultation on incentives, box 7.4

There are, in broad terms, two types of metric that are typically used at present:

- trains per hour (or similar), which, if compared to theoretical or planning headways, can give a 'point measure' of utilisation; and

- the Capacity Utilisation Index (CUI), measured over a section of route and for a particular time of day (e.g. a standard off-peak hour), which measures the extent to which the timetable can be 'compressed' in time while respecting planning headways.

Each of these metrics has its place, but each has limitations if intended to be used as an indicator of spare capacity:

- A comparison of trains per hour across a number of routes can be helpful in descriptive terms. For example, the recent London & South East RUS contained an analysis of peak hour trains on each track into each London terminus. The number of trains varies considerably, even between lines that are regarded as being at capacity, from 19 or 20 (or even higher) on lines such as the South West Main Line or Essex Thameside, to (for example) 14 on the WCML fast line and 9 on the ECML fast line. But, as the RUS points out, this reflects the relatively uniform speeds and stopping patterns on the SWML and Essex Thameside, compared to the mix of long distance (non-stop) and shorter distance services on the WCML and ECML. It would in theory be possible to run more trains on these lines (though in practice there would be other constraints, such as terminal capacity), but the impact on journey times (and industry revenue), particularly for long distance services, may be unacceptable. In practical terms, therefore, there is no spare capacity.

- CUI takes account of speed mix and stopping patterns, and is therefore in some ways a better measure. However, CUI is measured using, and is a function of, the existing timetable structure. It is therefore unable to indicate where a restructuring of the timetable may enable more services to be accommodated. It is also a function of the section of route over which one chooses to calculate the index. A route as a whole may have a high CUI, but individual sections of the route may have lower CUIs: the 'right' choice of route section is not fixed, but depends on what additional services one is considering running.

Both these metrics only give a partial picture of the constraints on the network. For example, constraints at junctions are not captured by either metric (although a version of CUI could be developed for individual junctions), and neither capture station/terminal constraints, either in terms of platform occupation or movements in the throat of stations.

These metrics do not reflect the fact that, in most cases, restrictions on additional services arise not from any single constraint, but from multiple constraints along a route. None of these constraints may be binding individually. There may be space at each individual constraint to add an additional service, but it may not be possible to timetable additional services through all the constraints combined to create an acceptable service.

For these reasons, we believe that capacity utilisation indicators have their place in planning and discussion with operators. However, the development of a network-wide suite of indicators would have a cost disproportionate to any benefit, particularly if the problem that they are intended to address is limited in extent. In particular, it

would be counter-productive if the industry was encouraged to manage directly against such indicators, for example by giving them status as a regulatory metric.

Q7.2

What are your views, additional to those already expressed in your response to our May consultation, on the policy we are considering further to levy a charge to incentivise better use of capacity?

We have no further points to make in addition to our response to ORR's May 2011 consultation.

We reiterate that we would support such a charge if the industry aim was to actively encourage more on-rail competition. If this is not the case, we do not think this type of charge would be appropriate because of the way in which services are specified for franchised passenger operators. Charging on this basis for open access operators (as ORR suggests in its on-rail competition consultation), may seem more appropriate due to the nature of these businesses. It does not seem appropriate to levy such a charge on franchised passenger operators which are less able to respond to this type of incentive. We believe there is a role for market-based mechanisms. However, large parts of the railway deliver external and/or societal benefits, which a market-based mechanism may not fully recognise.

We strongly support NERA's view that a more realistic objective is to adjust incentives to promote some improvement in capacity utilisation, instead of using them as a primary means of allocating capacity.

It is also worth noting that any such charge would need to be levied where the network has been declared as congested.

Theory would suggest that the purest way to levy a scarcity charge would be to auction capacity, however as we have said previously, this type of system would only work for end-to-end routes with pre-defined, uniform paths. In Network Rail's response to ORR's May 2011 consultation, we suggested that if it were agreed that it is appropriate to levy such a charge, that the charge could be levied as a mark-up (to reflect network scarcity) to the existing Capacity Charge.

Reservation Charge

We agree that it appears sensible not to proceed with a Reservation Charge as part of PR13. Our position has not changed since our response to ORR's May 2011 consultation. We welcome this early clarity. We note, however, that there may be a requirement in the recast of the First Railway Infrastructure Package for a compulsory reservation charge on the areas of the network that have been declared congested.

We welcome the additional analysis to be carried out by ORR on path utilisation.

Revenue Sharing

We believe that we can help operators reduce their costs, in the same way that we consider that operators can assist us to reduce our costs. The RVfM study concluded that one of the key 'unknown' cost challenges facing the industry is that of operators.

Therefore, we consider that this option should still be considered as an effective way to reduce costs in the industry.

Billing on the basis of the timetable

Billing on the basis of actual usage means that the charges recover costs which are incurred by actual variations in traffic. Indeed, this is consistent with legislation for charges to reflect the costs directly incurred.

We understand that it may be useful to compare charges based on actual usage against charges based on the timetable, to understand more about actual usage against planned usage. However, we are reserved about this being a ‘welcome simplification’[29]. Certainly, for Network Rail this would mean a complete overhaul of the current TABS and we would be interested to know whether this kind of change would be welcomed by our customers.

[29] ORR, Periodic Review 2013 consultation on incentives, Box 7.5

8. NETWORK RAIL'S FINANCING ARRANGEMENTS

8.1. ORR's position

In its consultation on incentives, ORR summarised its position as follows:

- Network Rail's cost of capital should reflect all of the risks it is exposed to as a business.
- The fact that Network Rail is currently entirely financed by debt, and that currently that debt is entirely underwritten by government, means that the company's actual cost of finance is substantially lower than its cost of capital reflecting the business risks it faces.
- This raises the question of how we should treat the surplus cash. For example, it could be re-invested in the network, rebated to DfT and Transport Scotland or used to pay down debt.
- Which option we choose matters. Our choice of option will affect the flow of funds in the industry. It will also affect the balance between the recovery of costs from current customers and funders and cost recovery from future customer and funders. It could also make it easier or harder in the longer term for Network Rail's financing structure to change, for example through the issuance of unsupported debt or ultimately equity. Such changes in the financing structure, and potentially the governance of the company, would affect the way in which it responds to our incentives, potentially improving the effectiveness of economic regulation.
- We recognise that pressure on public finances may result in a desire among funders for us to keep the revenue requirement in CP5 as low as possible. To the extent that options that achieve this increase Network Rail's debt, we will need to consider the long-term sustainability of its financial arrangements. We will also need to consider the balance between the interests of current and future customers and funders of the railway.

8.2. Summary of Network Rail's first response

Although ORR's first PR13 consultation included several important aspects of the financial framework, we noted that the approaches to WACC, the risk buffer, the ring-fenced fund and risk capital had not yet been consulted on. We did, however, make the following points in our response:

- The financial framework should be aligned with the overarching objectives for PR13 and with long-term industry objectives.
- Ultimately, it will be important to consider the package holistically and ensure that the net impact on Network Rail's risk is reflected in the allowed return.
- Early consideration should be given to the potential 'buy back' of certain elements of the RAB (and associated debt).

- For CP5, debt should be raised at a company wide level and ORR should determine a single cost of capital.
- The regulatory framework should be developed to facilitate the introduction of risk capital in CP5 because this could act as a key enabler for the proper functioning of market-based mechanisms and financial incentives such as cost control.

8.3. Network Rail's current position

Responses to consultation questions

Q8.1 Do you agree with the criteria that we have applied in assessing different options to Network Rail's cost of capital and our approach to its financial structure?

We broadly agree that the criteria applied are reasonable means of assessing different options in respect of our cost of capital and financial structure.

However, we also believe that consistency is important in respect of the approach to cost of capital and that this should be incorporated into the criteria. If, for example, a cost of debt approach was adopted in CP5 before reverting to a conventional WACC approach in later control periods, this would undermine the stability of the regulatory regime in the eyes of the external market (particularly rating agencies and investors) and inefficiently push costs into the future. A supportive regulatory regime that demonstrates its commitment in practice to output-based regulation is also important for the rating agencies.

The weight attached to each of the criteria is also important, e.g. the cost of debt approach is more affordable in the short term, but will place more pressure on the long term financial sustainability of the industry and could foreclose future financing options.

As noted below, we do not support moving to a cost of debt approach because we consider that the additional pressure on long term financial sustainability, and the reduced flexibility to change our financing structure, would outweigh the short term affordability benefit that funders would realise.

Q8.2 Do you agree that we should use a cost of capital for Network Rail that reflects the risks faced by the business, even though this may not reflect the company's actual financing costs?

Network Rail strongly agrees that its cost of capital should reflect the risks it faces even though this may not reflect its actual financing costs. Hence, our allowed rate of return should continue to include the implied cost of equity. We would emphasise that the form of corporate governance imposed on Network Rail does not change the risks to which it is exposed. For the avoidance of doubt, to ensure consistency and

comparability and to encapsulate all risk factors, we believe the Capital Asset Pricing Model to be the suitable approach to establishing Network Rail's cost of capital.

Deriving our allowed rate of return based on including the implied cost of equity provides a transparent view of our costs and risks. It also provides consistency in the financial framework which aids the evaluation of returns on internal projects and investments. In addition, it keeps open future financing options including the potential to:

- issue unsupported debt;
- issue equity finance (including through concessions);
- allow a RAB 'buy back'; and
- enable other industry reforms such as alliancing and project finance for some activities.

Whilst recognising that the approach to cost of capital will impact the level of charges in CP5, it is important to note that it affects the timing of future funding rather than the overall level of future funding that will be required. Failure to reflect the risks that we face with an equity component merely increases future revenue requirements and distorts potential decisions about the introduction of risk capital.

We also note that ORR has a duty not to make it unduly difficult for us to finance our activities[30], and moving to a cost of debt approach will put more pressure on the long term financial sustainability of the industry.

A cost of debt approach is also inconsistent with regulatory precedent in other industries. These precedents are discussed in more detail in a paper prepared by Oxera which compares the allowed return for regulated companies with unconventional ownership structures. This paper accompanies this response.

Q8.3 How do you think we should deal with the surplus cash that results from such an approach?

Because the cost of capital approach affects the timing of future funding rather than the overall level of future funding, we would be open to considering different ways that surplus cash could be used to reduce the overall cost of the network in CP5. For example, one option would be to retain the ring fenced fund which hypothecates expected equity returns to railway enhancements. Under this approach further outperformance can be paid to government through a dividend stream or rebate mechanism. As an alternative, we would be open to a dialogue about paying both expected and unexpected equity returns to government through a dividend stream or rebate mechanism. In this case the net effect on funding would be broadly consistent with allowing a rate of return based only on the cost of debt. We consider, however,

[30] Railways Act 1993, s.4 General duties of the Secretary of State and the Office of Rail Regulation, paragraph (5)(b)

that there is greater merit in a dividend stream/rebate approach because it would provide a more flexible mechanism.

If a cost of capital approach is introduced whereby any rebates are paid to government through a dividend stream or rebate mechanism, we consider that there would be merit in this cash (and the FIM fee) being paid to HM Treasury rather than DfT. We believe that paying any rebates and the FIM fee directly to HM Treasury would avoid potentially influencing DfT policies due to it being in receipt of these sums. ORR highlights that there are a number of issues with using a rebate to transfer surplus cash in Network Rail back to government, for example, the administrative arrangements[31]. There are however a number of ways that the existing mechanism for rebating funds from Network Rail to government could be simplified.

Finally, we note that irrespective of whether the ring fenced fund is retained or expected equity returns are paid to government, unanticipated equity returns can be reinvested, used to create a financial buffer, rebated to tax payers, or used to pay down debt.

Q8.4

What advantages and disadvantages do you see in our regulating Network Rail in a way that preserves the options for changes to the company's financial structure?

Network Rail strongly considers that Network Rail should be regulated in a way that preserves the options for changes to its financial structure. In considering how we will finance our activities, we continue to be positive about the benefits of introducing risk capital e.g. stronger financial incentives to control costs. It is, therefore, important that the conclusions of PR13 keep open future financing options by deriving our allowed rate of return based on including the implied cost of equity.

We also consider that preserving options for change to our financial structure will help to enable industry reforms such as concessions, alliancing, and project finance, which will ultimately benefit rail users and tax payers.

Funders may perceive the affordability of short term funding to be a disadvantage of keeping open future financing options by deriving our allowed rate of return based on including the implied cost of equity. However, as stated previously, it is important to note that the cost of capital approach affects the timing of future funding rather than the overall level of future funding required.

Q8.5

How should we strike the right balance between the interests of current customers and funders and future customers and funders?

Transparency is important when seeking to balance the interests of current customers and funders, and future customers and funders. Hence, it is important that

[31] ORR, Periodic Review 2013 consultation on incentives, paragraph 8.35

our allowed return continues to include the implied cost of equity, even if it is believed, in the short term, that a lower net funding requirement would be in the interest of customers and funders.

Network Rail also believes that adopting a cost of capital approach that is financially sustainable in the long term is important when balancing the interests of current and future customers. The cost of debt approach, for example, artificially suppresses costs today (by not including the implied cost of equity in our allowed return) that the industry will still have to bear in the future. If the increased future net funding requirement becomes unsustainable, this will have an adverse impact on the benefits enjoyed by future customers, relative to those enjoyed by current customers. Furthermore, it is important that the conclusions of PR13 keep open the future financing options, discussed above, as these have the potential to deliver benefits to both customers and funders. A RAB 'buy back', for example, would benefit funders by reducing the overall revenue requirement for CP5 and future years.

We are mindful of the fact that current funders could be attracted to a cost of debt approach because it results in a lower net funding requirement in the short term. However, we would reiterate that this approach only affects the timing of future funding rather than the overall level of future funding required. It also places more pressure on the long term financial sustainability of the industry and potentially makes future financing options more difficult to implement, which could have an adverse impact on the interests of future customers. As noted above, we consider that there would be greater merit in a dividend stream/rebate approach because it would provide a more flexible mechanism.

Other remarks

ORR highlights that because the FIM is effectively uncapped, at present, Network Rail does not face a hard budget constraint as any overspend can be financed by further borrowing under the FIM[32]. Although ORR is correct that the FIM is effectively uncapped, it is important to note that our borrowing is constrained by a debt to the RAB limit set out in our Network Licence.

ORR also considers that one of the disadvantages of the conventional financing approach is that there is potential for arbitraging between the WACC and the marginal cost of debt. It notes that one way of dealing with this issue is to adopt a split cost of capital approach[33]. If ORR wanted to adopt the split cost of capital approach, then one way to do so would be to make a distinction between the risk profile of sunk 'historic' costs and that of costs associated with investments over and above those necessary to keep these assets in a sustainable condition (on a steady state basis). It is not clear, however, what difference adopting a split cost of capital approach would have in practice and we would welcome ORR sharing with us any analysis that it has carried out in relation to this issue. Finally, this approach would be more difficult for rating agencies and investors to understand compared to a conventional WACC approach.

ORR states that there are a number of initiatives being discussed at the moment (e.g. devolution, concessions and cost and revenue sharing) and these raise an issue in respect of its approach to cost of capital, namely whether it is best for these changes to take place before considering introducing risk capital[34]. As noted above,

[32] ORR, Periodic Review 2013 consultation on incentives, paragraph 8.9
[33] ORR, Periodic Review 2013 consultation on incentives, paragraph 8.29
[34] ORR, Periodic Review 2013 consultation on incentives, paragraph 8.30

we consider our allowed rate of return should continue to be derived based on including the implied cost of equity. This also keeps open future financing options.

In its consultation ORR separates the different cost of capital options into those that it considers are appropriate in scenarios where Network Rail does and does not raise unsupported debt in CP5[35]. It is not clear to us why ORR is conflating the introduction of unsupported debt with the different cost of capital options. We strongly agree that our cost of capital should reflect the risks we face as a business and, therefore, our allowed rate of return should continue to be derived based on including the implied cost of equity, irrespective of whether we raise unsupported debt in CP5.

In the context of a rebate to government and flexibility to change Network Rail's financing structure, ORR highlights that it intends to set up discussions with the credit rating agencies and financial markets[36]. We would be keen to participate in, and add value to, these discussions and, therefore, request to be invited to them going forward.

As part of its modelling of the cost of debt approach, ORR assumes no in-year risk buffer for comparison purposes. It also notes that this approach is consistent with the view that Network Rail responds better to targets and other incentives and does not need an in-year risk buffer to be innovative, especially when it has a balance sheet buffer[37]. We strongly consider that we will need a risk buffer in CP5, irrespective of the approach to cost of capital. However, we are open to considering the form of the risk buffer in CP5, i.e. a balance sheet risk buffer and/or a P&L risk buffer. If there was no risk buffer we would not be able to adopt a whole-life approach and longer term costs would almost certainly increase.

ORR has modelled the net funding requirement under the different cost of capital approaches from CP5-CP7. It notes, however, that for the rebate, cost of debt and balance sheet buffer approaches, its analysis assumes that these approaches are followed in CP5 by reverting back to a gradualist approach from CP6 to CP7 as this better illustrates financial sustainability issues. Although we consider that it is very important to model the impact of the different cost of capital approaches on financial sustainability, we consider that the approach that ORR has adopted (reverting back to gradualist approach is CP6 and CP7) is misleading and that there would be greater merit in retaining a consistent approach from CP5 to CP7 in these comparisons.

In the context of financial sustainability ORR notes that Network Rail's debt is typically relatively long-dated and, therefore, it considers issues over the long term[38]. Although it is true that the average tenure of our debt is around 15 years, it should be noted that since the beginning of CP4 all of the nominal debt that has been issued has been 5 years or less in maturity.

As part of its discussion in relation to modelling the IIP approach, ORR states that because Network Rail's analysis uses the PR08 cost of capital assumption but does not include the issuance of unsupported debt, interest costs are not consistent with revenue[39]. As noted above, it is unclear to us why ORR is conflating the introduction of unsupported debt with cost of capital options. Although the IIP modelling does not

[35] ORR, Periodic Review 2013 consultation on incentives, paragraph 8.33-8.40
[36] ORR, Periodic Review 2013 consultation on incentives, paragraphs 8.37 and 8.46
[37] ORR, Periodic Review 2013 consultation on incentives, paragraph 8.39
[38] ORR, Periodic Review 2013 consultation on incentives, paragraph 8.50
[39] ORR, Periodic Review 2013 consultation on incentives, paragraph 8.56 (a)

include the issuance of unsupported debt, we do not consider that as a result it is inappropriate for us to assume an allowed return that includes the implied cost of equity. Our approach provides a transparent view of the cost of our activities and keeps open future financing options.

In respect of its modelling of the gradualist approach ORR assumes that the difference between Network Rail's supported and unsupported interest cost assumptions is 200bps[40]. We note that this may be the case currently, but 200bps does not reflect a long-term average. In addition, we do not believe that it is sensible to have the same FIM fee applied to very short dated debt as is applied to long dated debt (e.g.1 month commercial paper vs 30 year bonds) because this does not reasonably reflect the different financing costs that we face in reality. In respect of short dated debt the FIM fee actually increases industry costs because it results in our financing costs exceeding the prevailing market rates for corporate utilities.

ORR has carried out some high-level indicative modelling in order to estimate the net funding required in CP5 and other relevant numbers, such as debt[41]. We note that some of the financial results, particularly for the cost of debt and balance sheet buffer approach, fail the financeability test as the Adjusted Interest Cover Ratio (AICR) is 1.0 or less. We would therefore require some form of additional cash flow/risk buffer to absorb any cost shocks. Further, presenting the funding requirement net of Government FIM fee receipts is misleading as the cost to Government of providing the FIM is not shown. This presentation suggests more (supported) debt is favourable to Government when this in fact increases its long-run funding and support obligations to Network Rail.

Finally, much of ORR's modelling is predicated on reverse-engineering a WACC to target what it considers to be an appropriate surplus, AICR or gearing ratio, effectively treating the cost of capital as an output rather than an input. We strongly consider this approach to be inappropriate. Network Rail's cost of capital should reflect the risks it faces as a business and should not, therefore, be manipulated in order to achieve a predetermined target output. We strongly believe that ORR's modelling should treat the cost of capital as an input which reflects the risks we face as a business, and that financing ratios and associated outputs should be used solely to confirm whether the approach taken passes the financeability test.

[40] ORR, Periodic Review 2013 consultation on incentives, paragraph 8.56 (b)
[41] ORR, Periodic Review 2013 consultation on incentives, table 8.2.

9. THE INCENTIVE PROPERTIES OF OPEX AND CAPEX RECOVERY

9.1. ORR's position

In its consultation on incentives, ORR summarised its position as follows:

- It is important that the incentives on Network Rail are fit for purpose, especially given its current financial structure and governance.

- The way in which we allow Network Rail to recover opex and capex through its charges in itself has incentive properties. For example, our approach to determining which costs should be included in the RAB, and how the RAB is recovered through charges could affect the company's choice between solutions that are relatively opex-intensive and solutions that are relatively capex-intensive. The question of whether regulatory incentives give rise to undesirable 'capex-bias' has been considered in other regulated sectors.

- We think that it is important that our regulatory framework should not distort incentives on Network Rail to make certain types of expenditure and not others.

- We think that further work is needed to understand the incentive effects of our current framework on Network Rail. In particular, we want to understand better how different classes of expenditure feed into the calculation of efficiency, and the incentive properties that this could have on Network Rail.

- We are consulting on how incentives affect Network Rail and how we can improve them.

9.2. Summary of Network Rail's first response

In our first consultation we stated that we believe that it is important for the regulatory framework to support us in making capital and operating expenditure decisions that are aimed at minimising whole-life industry costs.

As to whether a bias between different types of expenditure currently exists, we stated that regulatory scrutiny during the periodic review process is fundamental and that this has worked well to date. In addition, there are other incentives on the company that influence this balance, which we consider to be broadly effective.

We stated that investment plans are also reviewed at the company level, through the Investment Panel process for example, which helps to ensure that proposed investment is appropriate.

9.3. Network Rail's current position

Responses to consultation questions

Q9.1

How do the incentive properties of our different treatments of different classes of expenditure affect operating decisions on the ground, e.g. is it the potential financial gain or loss that motivates actions or is are [sic] decisions more based on other factors such as relative complexity, cultural factors (e.g. tradition or professionalism) or the nature of Network Rail's financing and governance arrangements?

On the ground decisions are largely unaffected by regulatory treatments of different classes of expenditure. The considerations that apply are safety, asset condition, timescales and performance impacts. It should also be emphasised that the complex nature of the regulatory funding regime dulls its impact on decision making in the field.

Q9.2

Are the incentives on Network Rail affected by the different ways we may assess support, operations and maintenance costs, compared to renewals and enhancements expenditure? In particular, we may use a base year for support costs that is rolled forward by an efficiency assumption, whereas for renewals we will probably not roll forward a base year but will take a view on the likely level of expenditure in each year on a pre-efficient basis and then apply an efficiency assumption.

We recognise that it may be necessary for ORR to roll forward base year expenditure by an efficiency assumption for support costs, but take a view on the likely level of expenditure in each year on a pre-efficient basis and then apply an efficiency assumption for renewals. Whilst the process is necessarily imperfect, we do not consider that it creates systematic biases towards any particular type of expenditure or behaviour.

However, we must emphasise that it is important that incentives are set in a way that recognises the changing nature of the infrastructure, and unusual factors relating to the base year. Specific issues that should be taken into account include weather abnormalities and especially the mix of work.

Where work is 'repeatable', it is logical to use the unit cost of carrying out work in the base year and incentivise us to achieve efficiencies thereafter. This mechanism already contributes to the drive to reduce the unit cost of standard work items. In contrast, the assumed volume of work should be set based on required outputs, traffic volume and work bank fluctuations, so that we are not unduly rewarded or penalised for completing a volume of work which differs from the base year. If such adjustments are not made, the efficiency incentive would risk becoming an academic reporting requirement alone, and cease to be able to drive behaviour.

Q9.3

Do you expect Network Rail's work on whole-life costs to change its decision-making, and in what way?

We must focus on whole-life and whole-system costs and benefits if we are to obtain the best value for money for customers and funders. This means that we need to find a way to deal with the mismatch between the long asset lifecycles and the parts of the industry working over relatively short franchise and control period cycles.

Whereas the minimum initial costs approach considers only the upfront costs of project delivery, the whole-life approach looks at the potential tradeoffs between upfront costs and future costs and asset life, resulting in decisions that might appear expensive in the short term but are beneficial on a longer term basis.

We will continue to review and develop our whole-life cost analysis, which could result in changes to the makeup of our costs. For example, we could incur a higher upfront cost based on whole life Net Present Value, and target a lower post-commissioning cost and/or longer asset lives. In turn, this could result in a short term increase in capital costs until savings flow through.

There are certain features of the current regulatory regime that create disincentives for us to improve the way we operate. By way of example, there may be opportunities to buy rather than lease vehicles and save on finance and administration costs. However, as the increased renewals costs are incurred in CP4 and the benefit is not fully realised until CP5, such a decision would result in a reported inefficiency on renewals in CP4. The implications for logging up to the RAB, Financial Value Added and claimed efficiency are not always clear. We also note that the use of the Investment Framework for self-financing projects that deliver future efficiency savings has become unclear during CP4. There is currently a lack of clarity between this framework and the rolling RAB mechanism.

Q9.4

Is there any evidence of 'capex bias' at Network Rail? To what extent is this undesirable?

We do not consider that our incentives are affected by the different ways in which opex and capex costs are treated in the regulatory framework, and we do not consider that there is a 'capex bias' at Network Rail.

To a considerable extent, our expenditure is tied down at each periodic review. We consider that the periodic review process provides robust scrutiny of our plans, ensuring that no bias enters during the determinations. For enhancement projects, many of the decisions for a capital expenditure approach are reflected in the HLOSs which we publish before the SBP.

Some flexibility remains for us to adjust our expenditure outside of the periodic review determinations. However, our approach to making decisions also precludes biases emerging outside of the periodic review process. We set our plans on an annual basis with the aim of achieving our outputs, whilst outperforming the financial

settlement. This is not influenced by the difference in regulatory treatment of costs, but by a drive to secure income and reduce overall expenditure. Investment plans are reviewed at the company level, through the Investment Panel process for example, which helps to ensure that proposed investments are appropriate. Evidence of this can be seen through our focus on Financial Value Added and cost efficiency in the Delivery Plans of 2009, 2010 and 2011, rather than regulatory incentives.

Moreover, the Management Incentive Plan and the General Bonus Scheme, which are critical drivers of behaviour, impose targets that do not differentiate between different cost categories such as maintenance and renewals.

ORR notes that similar debates around capex bias are taking place in other regulated industries. Ofwat recently found mixed evidence around capex bias in the water industry. It should be emphasised that our objectives of fulfilling our outputs, whilst outperforming the financial settlement, are very different to the profit motives in place in other regulated sectors and are inherently less prone to biases towards certain expenditure types.

Finally, we would emphasise that the movement towards a whole-life cost approach will strengthen current arrangements, so that a capex bias is unlikely to emerge going forward.

Q9.5 Should we seek to equalise the incentives for different types of income and expenditure? How best might we do this?

Changes to the current framework are unlikely to make effective use of industry resources and we oppose a change of treatment. We do not consider that a change to the current regime would give rise to reduced life-cycle costs, and note that changes could create substantial complexity and would be likely to have large bedding-in costs. We also note that if ORR applies different weighting to the value of outperforming opex, this may encourage ‘gaming’ with respect to how we capitalise costs.

Going forward, ORR should focus on setting targets that reward management and staff for achieving efficiency and overall outperformance.

Other remarks

We do not agree with ORR when it says that ‘savings in capital expenditure tend to be one-off whilst savings in support, operations and maintenance expenditure tend to be recurring’[42]. Capital expenditure must be split into renewals and enhancements. In the case of renewals, savings are likely to be recurring, particularly where different or cheaper ways are found to carry out repeatable work items. Some savings on enhancements, such as platform lengthening, will also be recurring.

Similarly, we do not consider that ORR’s consultation document accurately reflects the financial upside of capex and opex savings. ORR claims that ‘if at any time Network Rail underspends on maintenance by a pound it keeps a pound and if it

[42] ORR, Periodic Review 2013 consultation on incentives, paragraph 9.5

overspends by a pound it pays out one pound more than it received (i.e. 100% incentive strength (i.e. a 100% incentive strength). However, the incentive strengths for capital expenditure are largely 25%'[43]. We would point out for example that the operation of the EBSM/REBS, which is likely to apply fully under ORR's proposals for CP5, means that we would give away 25% of our maintenance and opex savings, reducing its incentive strength. Similarly, if we outperform on renewals, whilst we may log up 25% of the outperformance and get a future benefit, in the period we have to make a 25% EBSM/REBS payment.

[43] ORR, Periodic Review 2013 consultation on incentives, paragraph 9.1

10. OTHER INCENTIVES

10.1. ORR's position

In its consultation on incentives, ORR summarised its position as follows:

- We recognise the importance of innovation if the rail industry is to deliver the value for money challenge as set out in the RVfM study.
- Many of the standard incentive tools we use in our periodic reviews create incentives for innovation, for example by challenging Network Rail to achieve efficiencies beyond those available using existing approaches, we encourage innovation. We will continue to incentivise innovation through these standard incentive tools. We expect this to be the main way in which we incentivise innovation.
- Given the barriers to innovation that have been identified in the rail industry, we ask whether additional more specific incentives are needed. We are not currently persuaded of the need for a specific innovation fund, but seek views on this. We also seek views on the use of innovation-related KPIs and innovation prizes.
- Rail is well placed to make a strong contribution to cutting the UK's carbon emissions and other positive environmental outcomes. We set out the options for how regulation can support this, including by encouraging greater energy efficiency through more on-train metering and better management of transmission losses, and supporting the industry's own proposals in the IIPs.

10.2. Summary of Network Rail's first response

In our first response, we stated that we are absolutely committed to playing our part in accelerating innovation in the rail industry, and that we have made considerable progress over the past two years with our 'Think, Explore, Prove and Do' model. Consulting widely with the industry was instrumental in helping to drive this work forward.

We asserted that it is crucial that, as an industry, we continue to drive technical and operational innovation forward. To-date the Technical Strategy Leadership Group (TSLG) has provided a useful platform on which to do this. TSLG sent out a strong signal of its intent to form, develop and lead the technical strategy for the industry, with the publication of the Rail Technical Strategy (RTS) consultation in Autumn 2010. It has also led on the industry's behalf the creation of a transportation Technology and Innovation Centre (TIC).

We recognised, however, that industry incentives to innovate could be improved. In particular we recognised that there is a need to move away from 'silo thinking', and that the rail innovation and growth team (RIGT) proposed by the RVfM Study has merit.

We said that we believe that funding for cross-industry innovation initiatives through the periodic review process could be an effective way of encouraging and incentivising innovation through the creation of a specific innovation fund for such projects, and merits further consideration, therefore, during PR13.

On environmental incentives, we said that we do not consider that additional incentives to encourage energy efficiency or environmental charges need to be introduced as part of PR13, given the initiatives that are currently ongoing across the industry.

10.3. Network Rail's current position

Responses to consultation questions

Q10.1

Do you agree with our overall proposed approach to incentivising innovation? If not, what do you propose we do instead?

Whilst we consider that ORR's approach of setting challenging efficiency targets provides incentives for innovation, we do not agree with the overall proposed approach to incentivising innovation as described in the consultation document. In particular, we see the industry-proposed innovation fund as the chief vehicle for focussing industry collaboration on the priority innovation challenges of the sector. We reiterate many of the advantages of the fund in our response to Q10.2.

Although we recognise that strengthening the incentives imposed on Network Rail alone may have merit, we are concerned that this will only encourage innovation in part of the value chain. Mechanisms should be put in place that promote innovation throughout the value chain, and encourage collaboration between industry parties.

Our experience is that there are three types of innovations in the rail industry, defined in terms of their time and risk profiles, and the parties undertaking them:

- innovations that are justifiable within foreseeable time horizons (the current control period and, to the extent that plans are being finalised, the next control period) and which are usually undertaken by a single party;
- innovations which are associated with higher risk and higher return (in particular with respect to identifying entirely new areas of potential investment); and
- innovations which tend to be cross-industry.

Whilst we have made considerable progress towards encouraging the first type of innovations, we recognise that more needs to be done to provoke more high return and cross-industry innovations.

Q10.2

What merit do you think there would be an innovation fund? How should such a fund work? How would we guard against 'crowding out' and ensure the fund did not displace existing expenditure?

As mentioned above, it is the higher risk and higher return and cross-industry end of the innovation spectrum which witnesses most under-investment. We consider that the innovation fund should provide the most compelling means of promoting this type

of innovation, since the fund would be charged with taking a long-term approach and focussing on high return and cross-industry projects. We would also point out that, at the present time, the fund is regarded by the industry as a priming activity for CP5, and it may be appropriate to review whether it is needed in future control periods.

Moreover, we do not consider that ORR's concerns around the fund – particularly with respect to value for money and the possibility of crowding out – are well founded. We address ORR's below.

We expect the Rail Delivery Group to give consideration to the merits of the innovation fund in due course.

Value for money

The RVfM study identified the need for an innovation fund and estimated that investment in innovation could generate whole industry benefit-cost ratios of between 3:1 and 5:1, with the potential to deliver in excess of £100m annual cost savings.

The proposed innovation fund in the IIP would be managed independently on behalf of the industry and regulator by the Technical Strategy Leadership Group (TSLG). TSLG will seek to ensure that funds are invested in innovation projects that are priorities for the industry based on the key challenges captured in the 2012 update of the RTS. Funds will be allocated on a competitive basis with an explicit objective of achieving value for money. Each project will have rigorous delivery targets and will be monitored carefully by TSLG. Best practice will be taken from Technology Strategy Board (TSB) project funding allocation and management. The approach will also enable us to be open minded about the 50:50 funding, which is similar to the model TSB use in their innovation programmes.

Funding and financial flows should be transparent. If the fund is to receive funding through Network Rail, it would be subject to the agreed industry-wide governance process.

Crowding out

Far from crowding out investment, we strongly believe that the fund will enable innovations that will not otherwise be realised. The economic arguments for a mechanism encouraging research and development (R&D) beyond that delivered naturally by the market are compelling[44], and we believe that the innovation fund is the appropriate delivery vehicle.

The fund will be unequivocally designed so as to finance schemes that would not be delivered otherwise by the industry. As in the current 'accelerating innovation in rail' programme managed by TSB, Network Rail would be committed to working with all relevant projects to ensure that the requirements of the network operator are understood and appropriate exploitation routes for innovation projects are identified to maximise the benefit from each investment. In addition, the financial incentive properties of the fund would be similar to established UK government inducements such as R&D tax credits, and as such the fund offers a mechanism that has been tried and tested previously.

[44] The seminal research in this field was conducted by Griliches (1958), Nelson (1959) and Arrow (1962). Comprehensive treatments of the theory and statistical evidence are provided by Griliches (1991) and Hall (1996). Recent empirical evidence around the importance of R&D spillovers and the need for strong R&D incentives is submitted by Aldieri and Cincera (2007), Rodríguez-Pose and Crescenzi (2008) and Hall et al (2009) for example.

There is also compelling evidence suggesting that firms with different characteristics, for example different sizes or managerial incentive regimes, have varying degrees of risk aversion[45]. Since programmes aimed at giving rise to innovations are risky by definition, certain firms are less likely to engage in R&D and associated activities due to their attitude to risk. We envisage the innovation fund being open to all industry players on an equal footing. As such, it will help encourage innovations that might otherwise have not come about because of differing attitudes to risk of various industry parties.

Q10.3

What merit do you think there would be in an innovation prize? How should such a prize work? Who should be eligible to enter? What sort of prize would best stimulate genuine innovation?

We welcome ORR's discussion of innovation prizes and endorse the idea of prizes. Prizes work well in other sectors, not only as a result of the direct incentive properties they possess, but also because of the second and third order 'ripple benefits' that they create.

The administration of prizes, the manner in which they are set and entries judged, together with the way in which the community is brought together, will be integral to their success.

Whilst there may be a role for the regulator in establishing governance arrangements, the process should be led and the submissions evaluated by industry bodies, which are best placed to assess them. We consider that TSLG is the appropriate body to award prizes. The processes should be fair and transparent, and participation should be encouraged from all parts of the industry.

We consider that between £1.1 million and £1.4 million should be allocated towards prizes over the course of the control period. We would suggest the following split of prizes in order to stimulate genuine innovation:

- £100,000 each for the best idea in the 4Cs of capacity, carbon, customers and cost; and
- £1 million allocated to a team that creates a new capability in a given specialisation.

We emphasise that we view innovation prizes as complementary to, and not a substitute for, the innovation fund. Any innovation prizes should be predicated on successful implementation.

[45] Examples of empirical studies include *inter alia* Walls and Dyer (1996), Coles et al (2006) and Rajgopal (2011).

Q10.4

In relation to the use of output KPIs, what KPIs do you think we should target and why? Should we monitor them only or should they have some incentive attached to them and if so what?

We share ORR's concerns around input-based KPIs and we oppose their use in CP5. We would welcome further evidence from ORR as to the likely efficacy of output-based KPIs.

If KPIs are to be introduced, the priority should be on managing significant innovative development programmes to agreed deliverables and milestones. KPIs for innovation should capture the following features:

- **relevance** of work being funded to the stated requirements of the current Rail Technical Strategy;
- **mix** of maturity and spread of topic areas that are included in the portfolio of investment; and
- **access** to previously funded technology and capability that contributes to the projects that are being undertaken.

We agree that measuring and managing the overall performance of R&D and innovation spend is important, since it will allow funders to continually improve the value that they achieve from their investments. However, we believe that it would be inappropriate to introduce targets for KPIs during CP5. Doing so could create considerable costs and, equally importantly, encourage improper focus on untested measures in an area which is characterised by a large degree of uncertainty.

Q10.5

Do you think that KPIs should be introduced for companies other than Network Rail to monitor innovation across the wider industry?

Whilst there may be merit in monitoring KPIs relating to innovation across the wider industry, we are concerned that this could introduce a further regulatory administrative burden.

It may be appropriate to develop industry-wide best practice guidance in order to encourage a whole-system approach for proposed solutions. The principles described in our response to Q10.4 could form the core of a best practice, unified approach. Embedding similar and aligned incentives in franchises as in Network Rail control period determinations could encourage cross-industry innovation activities.

Q10.6

Beyond any comments that you may have made to us in response to our May consultation, do you have any comments on our overall approach to environmental incentives? Specifically, do you think we should introduce other environmental incentives beyond those that we are proposing? Do you think we should go further in encouraging the rail industry to improve its environmental performance even if this resulted in a shift to other modes?

We do not have any major concerns with ORR's overall approach to environmental incentives (although we discuss incentives for on-train metering in more detail below).

We do not consider that environmental charges should be introduced as part of PR13, given the variety of environmental initiatives that are currently ongoing across the industry. In particular, we agree with ORR's concerns about introducing noise differentiated track access charges, which may introduce a disadvantage for rail as compared to other transport modes. We believe there should be a level playing field, and that internalisation of external costs should only be introduced if applied to all competing transport modes. Levying environmental charges specific to the rail industry may act as a perverse incentive, given that rail is a relatively environmentally friendly form of transport.

Q10.7

We are keen for the industry to propose methodologies for monitoring emissions and producing improved whole-life, whole-industry business cases. What role do you think the ORR should play in this process?

Beyond ORR's existing role in monitoring the efficiency of Network Rail and the wider industry, we believe there are three key areas where it can support efficient performance specific to the environmental impact of rail.

On-train metering

A key environmental objective is to increase energy efficiency across the GB network. We strongly support incentives to increase on-train metering (OTM) across the GB fleet, as it is a very effective way to understand more about electricity usage, which can facilitate plans for efficient energy usage. Not only is this information useful for operators, in terms of more control over their Traction Electricity Charges, but also for Network Rail and the industry as a whole in looking at electricity usage data across the network to allow longer term electrification and capacity planning to be optimised to reduce whole-industry, whole-life costs. For this reason we think that serious consideration should be given to mandating OTM from the end of CP5.

Currently, around 20% of traction electricity on the GB network is metered[46], which is a positive move. However we still have a long way to go. Network Rail has already made significant steps in this area, through the development and introduction of our new OTM billing system, and more recently through our plans to meter as many of

[46] 'Metered' in this context refers to electricity that is billed based on metered consumption.

our own sites as possible. Therefore, we would suggest that ORR considers introducing more effective incentives for operators to fit electricity meters and to share metered data with the industry to enhance efficient operations across the network as well as the quality of longer term electrification and capacity planning. Currently, it appears to be difficult for operators to make positive business cases where franchises are due to expire soon. We would support the creation of an appropriate fund that has full cross-industry governance and approval mechanisms to be made available to the industry to fund meter fitment, where appropriate.

Transmission losses

We support incentives on operators and Network Rail to reduce/manage traction energy consumption and transmission losses (wherever they occur) during CP5, whenever the conditions to do this allow solutions that are both practical and economically justifiable. In ORR's consultation, it says that Network Rail 'is not well incentivised to do so [manage transmission losses] as it passes the full cost of the electricity used through to the operators of electric trains'[47]. While we agree that the incentives for Network Rail could be strengthened, we also participate in the volume wash-up for our use of traction power, and so we are currently incentivised in a similar way to modelled train operators to reduce the losses where possible.

Network Rail is examining a proposal to convert the existing 3rd rail Direct Current (DC) traction system in the South East to Alternating Current (AC) overhead line, which would improve transmission efficiency, amongst other benefits. If implemented, this would need cross-industry co-ordination due to the infrastructure and rolling cost implications and integration with the proposed rolling programme of electrification.

Significant progress has been made in this area recently, specifically through the creation of the energy efficiency working groups, which have been tasked with looking at projects to increase energy efficiency. A key debate has been around ways in which to reduce transmission losses. Recent results from the work carried out by the group show that there are things we can do, i.e. replacing life expired ceramic insulators with polymeric types on the third rail, which can increase energy efficiency on the DC network. It has proven challenging to find positive business cases for reducing transmission losses on the DC network in any other ways, and even more difficult on the AC network. This has been discussed at length with the industry at the working groups, and members have agreed that the polymeric insulators work was the most feasible and economic option, although the benefits are small.

We agree that we must take account of the value of transmission losses in all our decisions. Indeed we do this already, which is consistent with the relevant asset policies. We agree that these considerations should be made more explicit. In calculating business cases, we use third party future energy price trend data (e.g. DECC Energy Price Trend) for long term (>30 year life) investments in the RAB. Such reference future price trend data need not apply when calculating business cases for short term (<10 year) maintenance interventions.

In its May 2011 consultation, ORR proposed setting an efficient losses mark-up for CP5. However, we consider that it would be more appropriate to consider different options for incentivising Network Rail to manage losses efficiently, for example, holding Network Rail to account against specific projects in a published CP5 plan.

[47] ORR, Periodic Review 2013 consultation on incentives, paragraph 10.54

Such a plan could include best-practice techniques as well as specific improvement projects. As discussed above, we believe the key to success in this area is for all members of the industry to be similarly incentivised to do their part in increasing energy efficiency across the entire network.

ORR has raised the possibility of setting an efficient losses mark-up, although this is not addressed explicitly in its consultation document. The key problem with this proposal is that until an Electricity Supply Tariff Area (ESTA) is 100% metered, it is not possible to measure transmission losses. A losses mark-up would therefore seem to us to be impossible to implement until 100% metering is complete.

Regenerative braking

The use of regenerative braking is vital in achieving energy efficiency. Incentives to actively use regenerative braking should encourage this. However, it is difficult to model the benefits of regenerative braking where operators' usage is still estimated using modelled consumption rates. Emerging data from OTM suggests that regenerated energy is highly variable. We consider that the current regenerative braking discounts are too simple to accurately reflect the real savings from regenerative braking. Therefore, we would suggest that, by the end of CP5, incentives are introduced to encourage operators to adopt regenerative braking for metered usage only.

Other remarks

In its consultation, ORR says that efficiency targets placed on Network Rail 'will have a significant effect in driving environmental improvements'[48]. We would welcome further detail around this statement, as we are not convinced.

[48] ORR, Periodic Review 2013 consultation on incentives, paragraph 3.2

11. DEVOLUTION AND SEPARATE PRICE CONTROLS

ORR's consultation on incentives did not relate explicitly to devolution and the possibility of separate price controls. At its workshop on incentives, held on 9 January 2012, ORR set out its position around these issues. In this chapter, we therefore state our position with respect to devolution and separate price controls.

11.1. Network Rail's current position

In CP4, separate revenue requirements and some separate outputs were set for the network in Scotland and England/Wales. We stated in our first consultation response that we consider that 'there would be considerable merit from extending much of the same price control approach that ORR adopted for CP4 for England & Wales and Scotland, to all ten of Network Rail's devolved routes'. We also stated that ORR 'should make separate determinations of the revenue requirements for each route'.

As emphasised in Chapter 3, we believe that it is extremely important that we are afforded the freedom to offset underperformance on one route with over performance on another, without undermining aggregate outputs and outcomes. We are convinced that regionally inflexible output determinations will increase our risk substantially, and will place significant upward pressure on our costs. While ORR might wish to calculate separate revenue requirements for each route, we consider that this should not lead to determining funding for each route or to route based charges.

There remain a number activities and some cross-network services, such as freight, which are more efficiently and effectively managed on a network-wide basis. Thus we want to retain the one-company entity whilst adopting local delivery – we see this as the best of both worlds. This leads to the following:

- The single legal entity that exists for Network Rail should be retained for the foreseeable future, although Network Rail is considering potential further changes to its status which could drive further efficiencies.
- The company should continue to be financed at a company-wide level.
- Financial outperformance or underperformance should continue to be considered at the level of England/Wales and Scotland to be consistent with government funding, allowing us to exploit a portfolio effect and avoid the introduction of increased risk.
- Since the relationship between traffic and cost is the same in different parts of the country and only varies according to the lifecycle of the asset, variable track access charges should continue to be set at GB-wide levels. This will maintain simplicity for train operators and ease interoperability between routes, and will not undermine opportunities to benchmark cost efficiencies between routes.
- Although the RAB could be disaggregated by route, we are not advocating this at this stage since the routes have only recently been created and we do not want an initial split to prematurely ossify the system if it proved to be suboptimal later.

Because, unlike Scotland, the devolved routes have only recently been established, we believe there should be a suitable change control mechanism for disaggregating

outputs and REBS baselines. This would cater for situations where route boundaries change or new routes are created or where measures prove to have been split unfairly between the routes.