Review of the Railways Access Code

A REPORT PREPARED FOR CBH

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Boxes

Figures

Tables

1 Introduction

1.1 Background

1.1.1 The Regime and Code

Western Australia's rail network access regime is established by the *Railways (Access) Act 1998 (WA)* (the Act), and the complementary Railways Access Code (the Code).

The Act provides for the establishment of the Code as subsidiary legislation, providing more details as to how the regime will work in practice.

The Code is currently undergoing a scheduled review under the terms of the Act.

In the Code review issues paper, the ERA notes that Section 4(1) of Part 2 of the Act, states that "The Minister is to establish a Code in accordance with this Act to give effect to the Competition Principles Agreement in respect of railways to which the Code applies."

We understand that the primary purpose of this review of the Code is to assess the suitability of the provisions of the Code to give effect to the Competition Principles Agreement (CPA) in respect of railways to which the Code applies.

1.1.2 The CPA

The CPA contains a number of clauses relating to state-based access regimes (under the rubric of clause 6: *Access to Services Provided by Means of Significant Infrastructure Facilities*).

There are two particularly relevant sets of provisions for this review.

The first set of provisions relates to the principles of the State-based regime, and in particular whether the Code gives effect to the principles (Clause 6(e) of the CPA).

The second set of provisions relates to the objects of the State-based regime, and the setting of regulated access prices (Clause 6(f)):

a. Objects clauses that promote the economically efficient use of, operation and investment in, significant infrastructure thereby promoting effective competition in upstream or downstream markets.

b. Regulated access prices should be set so as to:

    i. generate expected revenue for a regulated service or services that is at least sufficient to meet the efficient costs of providing access to the regulated service or services and include a return on investment commensurate with the regulatory and commercial risks involved;

ii. allow multi-part pricing and price discrimination when it aids efficiency;

iii. not allow a vertically integrated access provider to set terms and conditions that discriminate in favour of its downstream operations, except to the extent that the cost of providing access to other operators is higher; and

iv. provide incentives to reduce costs or otherwise improve productivity.

The CPA provides high level guidance as to the requirements of an access regime. Whilst there is a preference for a 'negotiate-arbitrate' approach, much of the detail about how to make this an effective means of seeking access is left to the particular jurisdiction. With that said, the principles established in the CPA have been extended and interpreted in important respects across a range of regulated industries. We use experience and insights from these other regimes to highlight deficiencies in the Code.

1.1.3 Price floors and ceilings

The price of access is a critical element in any access negotiation. Consequently, the provisions of the Code relating to price determination will go a long way to determining the success or failure of the regime.

The Code allows for the establishment of price floors and ceilings, within which an access price can be negotiated between the access provider and access seeker:

- The floor price test in clause 7 of Schedule 4 of the Code specifies that an operator who is provided with access must pay an amount not less than the incremental costs resulting from its operations on that route and use of that infrastructure.
- The ceiling price test in clause 8 of Schedule 4 of the Code prescribes that an operator provided with access must pay an amount no more than the total costs attributed to that route and associated infrastructure.

Importantly, Clause 2(4) of the Code specifies that Gross Replacement Value (GRV) is to be used to determine annual capital costs. GRV is calculated as the lowest current cost to replace existing assets with assets that:

a. have the capacity to provide the level of service that meets the actual and reasonably project demand; and

b. are, if appropriate, modern equivalent assets (MEAs).

Further requirements for the railway owner in the negotiation of prices are set out in Clause 13 of Schedule 4 of the Code. Section 46 of the Code requires a railway owner to submit to the ERA for approval the costing principles that will, among other things, be applied when determining the floor and ceiling prices referred to in Schedule 4.

1.2 Our task and overview of findings

Frontier Economics (Frontier) has been engaged by Co-operative Bulk Handling Limited (CBH) to analyse and critically review the operation of the Code.

CBH has found through a long period of experience with the WA regime that the Code has some fundamental limitations. It has asked us to consider how the Code might be improved to overcome these limitations in a manner consistent with the provisions of the CPA; that is, to consider options for improvement consistent with a negotiate-arbitrate framework and the pricing objectives.

Our review has focused on two issues:

- *How to improve the effectiveness of the negotiate-arbitrate model*

Economic analysis suggests that there are some clear requirements for efficient negotiations where one party has a significant bargaining advantage over the other.

These requirements include a means of addressing the information asymmetry between the access provider and access seeker, and an understanding of how an arbitrator is likely to resolve disputes on key price and non-price terms of access. On these elements, the Regime as currently implemented in the Code is not effective, as is shown by the relatively large number of agreements reached outside the Code, and the fact that since its establishment in 2000 no agreement has been reached under the Code.

We provide a number of suggestions for improving the operation of the negotiate-arbitrate model and the Code, including providing for a stronger role for the Regulator to expedite negotiations and resolve disputes. This also includes taking some key price setting parameters "off the table" – particularly asset valuation and determination of the Weighted Average Cost of Capital (WACC).

- *How to make the floor price and ceiling price process more effective, with a particular focus on a more appropriate method for estimation of capital costs*

The current GRV method for estimating capital costs under the Code has been a source of contention both in previous Code reviews and in the NCC's assessment of the certification of the WA rail access regime. This is for good reason. In our view, it has been and continues to be a major barrier to achieving effective negotiations and access prices consistent with the objectives of the CPA.

We find that the current GRV approach:

- is complex and not transparent from access seekers' point of view as it relies on the estimation of optimised replacement costs, which cannot be tied to current investments. This uncertainty means that access seekers are likely to be dissuaded from making marginal investments that create economic value (resulting in system under-investment).

- is currently being implemented in a way that has the potential to enable Brookfield Rail to recover more than its efficient costs.

Moving to a 'line in the sand' approach to asset valuation would be a considerable improvement over the current approach, as it would:

- Reduce the scope for disputation over asset valuation and enhance the ability of parties to negotiate within a more reasonable and predictable range
- Improve incentives for new investment
- Limit the possibility of prices for access embodying windfall gains to access providers (due entirely to the tendency for replacement costs to rise over time)
- Improve the consistency of the WA rail access regime with other rail and other industry access regimes in Australia

2 Improving the effectiveness of the negotiate-arbitrate model

The CPA expresses a preference for a 'negotiate-arbitrate' model for determining the terms and conditions of access. The CPA states that State access regimes should:

> 6(5)a ...promote the economically efficient use of, operation and investment in, significant infrastructure thereby promoting effective competition in upstream or downstream markets.

In the context of the ERA's Code review, we consider the options for better ensuring the Code can deliver against this objective.

2.1 The efficiency of negotiated outcomes in the context of uneven bargaining power

Negotiate-arbitrate models for determining terms of access can deliver economically efficient outcomes when the parties to negotiation have similar bargaining strength. If one of the parties to the negotiations has a much weaker bargaining position than the other, the stronger party can extract surpluses (e.g. through an excessively high access price), which would not be consistent with economic efficiency.

Typically, left unconstrained by regulation, it is the infrastructure owner that enjoys a natural bargaining advantage over access seekers. This is so for a number of reasons.

- Firstly, the asset owner is already 'in' the market and has the option of denying access to the seeker if the terms offered are unfavourable — the access seeker cannot compel the asset owner to grant access.
- Secondly, the access provider may enjoy significant market power because the sorts of infrastructure assets that are subject to access arrangements usually have natural monopoly characteristics. Namely, due to economies of scale and scope advantages, it is often cheaper for a single network to serve the market than for multiple, competing networks. This means that access seekers may have few (or no) alternatives apart from the network they are seeking to negotiate access to. If the asset owner did face competition from other networks, there would be stronger incentives for the access provider to offer terms that are consistent with economic efficiency as proponents would be able to seek access elsewhere if the terms offered by the asset owner were unfavourable.
- Thirdly, even if other infrastructure did exist, due to technical constraints, other infrastructure may be very poor substitutes to the network that the

customer is seeking access to. For instance, a firm that cannot feasibly relocate production (e.g. because it can only produce grain in a particular region, or because the location of its mines are fixed) may have few choices over the rail infrastructure it can use; utilisation of more distant rail networks would generally involve higher transportation costs that could make use of those alternative routes uneconomic.

- Finally, the asset owner generally has much greater information about its own network (e.g. the cost of the network, the age/health of the assets, utilisation and future capacity of the network) than would access seekers.[1] If the terms of access depend, in part, on an understanding of the costs associated with installed and future (i.e. incremental) network capacity, the asset owner will typically have an advantage over access seekers during negotiations.

In principle there may be two types of asset owners. The first kind of owner is one who does not compete in downstream markets with the access seeker. For instance, the asset owner's downstream activities may involve marketing/trading metals and mineral, whereas the downstream activities of the access seeker may be the marketing/trading of grain. Even if the access seeker and access provider do not compete in downstream markets, the asset owner would still have an incentive to exploit any market power and information advantages, when negotiating with access seekers, in order to extract a higher price than would be economically efficient because such a strategy would maximise its overall profits.

The second type of asset owner is one that does compete directly with the access seeker in downstream markets (e.g. because both parties produce the same goods upstream and sell these downstream). Such an asset owner may have strong commercial incentives to deny access to a proponent so as to exclude a potential competitor from the downstream market (e.g. by exercising its superior bargaining position during negations). This may hinder the development of downstream competition, to the detriment of end-users.

It is to avoid such outcomes that WA rail access regime exists. The CPA envisages these issues and hence clause 6(4)e states that a State access regime should incorporate the following principle:

> ....The owner of a facility that is used to provide a service should use all reasonable endeavours to accommodate the requirements of persons seeking access.

Given that the bargaining power in such negotiations is, in most circumstances, likely to be skewed in favour of the asset owner, there is an important role for an arbitrator to ensure that if commercial negotiations fail, economically-efficient

[1] This is very analogous to the widely recognised problem in regulated industries, where there is usually a significant asymmetry of information between regulators and regulated businesses.

outcomes can still be secured. In order for the negotiations to produce efficient economic outcomes, the access framework should ensure that:

- The information asymmetry between access provide and access seeker is addressed, so that the access seeker can verify that the terms on which access is offered is reasonable;
- If negotiations fail, the arbitrator's decision removes the ability of the access provider to dictate key pricing elements; and
- The arbitrator's intended approach to those pricing elements is set out with sufficient clarity that the parties can reasonably predict, at the negotiation stage, what the arbitrated outcome is likely to be, should the matter proceed to arbitration.

2.2 Effectiveness of the access regime under the current Code

Section 2A of the Act states that:

> The main object of this Act is to establish a rail access regime that encourages the efficient use of, and investment in, railway facilities by facilitating a contestable market for rail operations.

Section 4(1), Part 2 of the Act provides that the Code should give effect to the CPA in respect of railways to which the Code applies. As noted above, the overarching object of the CPA is to promote effective competition in upstream or downstream markets.

There are two significant barriers to the development of effective competition in upstream or downstream markets. The first is the significant market power of the incumbent railway networks, which derive from their natural monopoly characteristics. In addition, as argued above, railway asset owners enjoy significantly greater bargaining power than access seekers.

In order to advance the objective of promoting effective competition in upstream or downstream markets, it is necessary to have a Code that addresses both the significant market power of incumbent railway networks, and the imbalance in the bargaining positions of access providers and access seekers.

Under an effective Code, one could expect to see a number of applications for access that ultimately result in successfully negotiated agreements. The evidence is, however, that the existing Code is not effective. As the WA Parliament's Economics and Industry Standing Committee noted in its October 2014 report:[2]

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2 WA Parliament Economics and Industry Standing Committee, The Management of Western Australia's Freight Rail Network, Report No.3 October 2013.

- Since the promulgation of the Code in September 2001, only two applications for access to the WA freight rail network have been made under the Code.
- One of these applications has been abandoned. The other application, by CBH in December 2013, is yet to be resolved.
- By contrast, a total of 20 access agreements have been negotiated between Brookfield Rail and various other operators outside the Code since 2006.

The report cited the example of Karara Mining, which initially considered seeking access to Brookfield's network under the Code, but concluded that the Code was not able to offer any useful support in procuring access to the network. Ultimately, Karara Mining negotiated terms of access with Brookfield outside the Code. Further, the final access agreement between the parties expressly excluded the Code from operating between Brookfield Rail and Karara Mining under the 15-year duration of the agreement.

Karara Mining reported that it chose to circumvent the Code because it was concerned that there was insufficient certainty that any application for access could be resolved under the Code within an acceptable timeframe. Karara Mining also considered that the floor and ceiling pricing mechanism lacked transparency and was "ineffective".

The Standing Committee concluded that the resulting agreement between Karara Mining and Brookfield shifted most of the risk associated with upgrading the infrastructure necessary for the access agreement away from Brookfield, onto Karara Mining.

In summing up its views on the effectiveness of the Code, the Standing Committee stated the following:

> The application by CBH Group in December 2013 is the first access proposal relating to the freight rail network to trigger the formal involvement of the ERA in considering the lessee's floor and ceiling prices. In seeking access to the freight rail network, Karara Mining found the Code to be ineffective and negotiated directly with Brookfield Rail. As part of this process, and at Brookfield Rail's request, Karara Mining agreed that the Code could not be applied for the duration of their 15-year agreement. It seems that the Code is not as effective as it might be and, in some circumstances, may actually jeopardise development.

In our view, the Code as it is currently specified, is not working; there appears to be a strong case for revising the Code in order to improve the effectiveness of the WA rail access regime.

2.3 Improvements to the Code that should be made

In our view, there are a number of significant weaknesses with the Code that should be addressed if the effectiveness of the Code is to be improved:

- The access regime relies on a negotiate-arbitrate model. Under this model, arbitration is a 'back-stop' in the event that the parties cannot arrive at a negotiated agreement. However, under the present Code, the hurdles that the access seeker must clear before it can access arbitration are too high. This, in turn, weakens the incentives of railway owners to negotiate in good faith (see Section 2.3.1)
- The floor and ceiling prices result in price ranges that are too wide and too variable to assist negotiations between the parties. As such, the floor and ceiling prices under the Code are ineffective. In order for negotiations to proceed more effectively, the regulator should be given responsibility to reduce the variability around floors and ceilings by taking contentious issues like asset valuation and WACC 'off the table' in negotiations. (Section 2.3.2)
- The Code provides railway owners too much flexibility to extend the timeframes for reaching a negotiated outcome. (Section 2.3.3)
- Under the existing Code, the Regulator plays only the peripheral role of determining floor and ceiling prices. In order for the Code to work more effectively, the Regulator should have more responsibilities including mediating negotiations (or referring disputes to an independent mediator), acting as the arbitrator of unresolved disputes, and developing pricing principles or benchmark tariffs to guide negotiations. These additional roles should be supported through appropriate resourcing of the Regulator. (Sections 2.3.4-2.3.6)

We discuss each of these suggested improvements in turn below.

2.3.1 The hurdle for accessing arbitration should be lowered

The hurdle for seeking arbitration is presently too high for it to represent an effective safeguard should commercial negotiations fail. Prior to seeking arbitration a proponent must first show:

- it has managerial and financial ability (section 14); and
- that its operations are within the capacity of the route or expanded route (section 15).

Even after providing this information the railway owner can notify the proponent of its dissatisfaction with the information provided on a few occasions before it will constitute a dispute (section 18)[3].

[3] Under section 25 of the Code a dispute also arises if the access seeker has made a proposal for access that complies with the Code but the owner has refused to negotiate as required by section 13 or the timelines for negotiation have passed.

The process specified in the Code in relation to the requirements for access proposal and when a rail owner has a duty to negotiate places the burden of proof on an access seeker to show that its proposal is sound. It also potentially prevents those seeking access on the basis of prospective commercial opportunities from doing so.

Recent experiences suggest that there is scope for a rail owner to exploit these provisions. The significant delays associated with these processes are highlighted by the fact that CBH launched the formal proceedings under the Code in December 2013 and as of March 2015 no settlement with Brookfield had been reached.

These arrangements do not promote efficient access. Presumably the specified conditions that access seekers must meet are intended to protect the rail owner from frivolous access requests. However, it is unlikely that this is a real cause for concern because there is very little incentive for access seekers to submit frivolous requests.

In our view, the over specification of the requirements placed on access seekers has contributed significantly to the failure of the WA access regime to date. As noted above, since the promulgation of the Code in 2000 there have been few applications for access under the Code and none of these requests have resulted in either a negotiated or arbitrated settlement.

We recommend that the hurdles faced by access seekers should be lowered. As such, we recommend that Sections 14 and 15 should be removed entirely from the Code. This would bring WA in line with rail access regimes in other jurisdictions.

The cumbersome requirements under the Code, as currently drafted, can be seen by comparing the Code with Part IIIA of the CCA (see Box 1). Under Part IIIA if the service provider and access seeker are 'unable to agree' on one or more aspects of access to a declared service, either party may notify the ACCC of an access dispute. The Act does not specify in detail what unable to agree is nor does it detail the form an access proposal must take or place requirements on the access seeker to prove its business model. Instead the arbitrator (in this case the ACCC) seeks details of the access proposal, the dispute and information that suggests that the parties have been unable to reach agreement about one or more matters related to access. Its own guidelines suggest that it will confirm its jurisdiction and the existence of an access dispute within six days of receiving the notification from one of the parties.[4]

Certainly, these guidelines seem to have been followed in the only arbitration completed by the ACCC under Part IIIA: the Services Sydney and Sydney Water

[4] ACCC (2006) Arbitrations, A guide to resolution of access disputes under Part IIIA of the Trade Practices Act 1974, April 2006 p17.

dispute relating to access to Sydney Water's sewerage network. In that case the ACCC received written notification of an access dispute from the access seeker, Services Sydney, on 6 November 2006 and by the 21 November it had already held a meeting with the parties to discuss the issues in dispute. The whole dispute was resolved by June 2007.

Box 1: Dispute notification arrangements under Part IIIA

Either a prospective user of a service or the service provider may notify the ACCC of an access dispute if they are unable to agree on terms and conditions for access to a declared service.

Section 44S of Part IIIA of the Act sets out matters that must be addressed in an access dispute notification. In summary, the ACCC requires that:

- the notification of an access dispute be in writing;
- either the service provider or the third party are a corporation or access is or would be in the course of constitutional trade or commerce;
- the notifier is 'unable to agree' with the provider on one or more aspects of access to the declared service

The threshold to show that parties are unable to reach agreement is quite low. For example:

- either the access seeker or the provider must have made a request of the other party, or put a proposal to the other party; and
- that the other party must have refused the request or rejected the proposal. The refusal may be an explicit or a constructive refusal (e.g. where there has been in response within a reasonable time).

The notification must include certain information — the name and address of the notifier and other party to the dispute, a short description of the notifier's existing or anticipated business, the facility used, a description of the access dispute, the aspect of access on which the parties agree and disagree, a description of efforts, if any, made to resolve the dispute, whether access would involve extending the facility, a description of the direct costs of and methods by which access can be provided, any risk to human health or safety.

Source: Taken from ACCC guide to resolution of access disputes under Part IIIA

2.3.2 Floor and ceiling prices need to be more effective in facilitating negotiations

The Code requires the Regulator to establish costs (revenue requirements) relevant to the floor and ceiling prices to facilitate negotiations between upper and lower limits (see section 1.1.3).

In our view, the Regulator's determined negotiating range for prices is far too wide to provide any useful guidance or starting point for negotiation between the parties over access prices.

For the regime to be more effective, it would be helpful for the Regulator to take some issues "off the table" when the parties are negotiating. There are likely to be some areas of commonality between the proponent and rail owner where the interests and incentives align. In these areas an efficient negotiated settlement should be possible with limited regulatory involvement. However, in other areas, where the parties' interests diverge materially, significant disagreement is likely to

arise. If unconstrained, such disagreements will generally tend to favour railway owners because they can exploit their strong bargaining position. Limiting the scope of the issues to be negotiated by taking certain key issues "off the table" also promotes more effective and manageable negotiations.

In our experience, the two most controversial issues in access disputes tend to be:

- the return on capital invested by the access provider (i.e. WACC); and
- the value of the regulatory asset base (RAB), upon which a rate of return is earned

Usually, these two elements jointly account for a very significant proportion of access charges. They are very difficult to resolve in a negotiation process because they largely involve transfers between the parties rather than affect the real allocation of resources. This is because railway infrastructure is sunk; as long as the price exceeds the marginal cost of access the access provider will continue to supply.

The current model of floor and ceiling determinations does not offer sufficient certainty to encourage effective negotiations. The ceiling calculations are particularly unhelpful as these do not "lock in" a RAB. The RAB is subject to unpredictable changes and severe information asymmetries. The GRV method by which the ceiling price is derived by the railway owner and the ERA is generally not transparent, and we understand that access seekers have had difficulty obtaining ceiling cost information from the access provider (due to confidentiality claims). It is also unclear what economic relationship GRV should have with actual investments made by rail providers (e.g. where in practice there has been no capital investment for a long period, should the access price offered be a long way below GRV?). This raises considerable scope for unresolvable disagreement between the parties. Indeed, that has been the experience to date. Further discussion of this is contained in 3.1.

The Code also requires that the Regulator make regular determinations of the WACC to enable calculation of ceiling prices. However, the Regulator does not provide a firm landing on this in a way that is helpful in reducing the scope for disputes around access. In particular, the ERA's latest WACC determination relates to a term that is not necessarily relevant to access negotiations.[5]

The effectiveness of the WA rail access regime could be improved greatly if the Regulator were to make annual determinations of a ceiling price based on the

[5] The ERA's Revised Draft Decision on WACC related to a long-term WACC, without defining what long-term actually means.

value of the (fixed[6]) RAB and the rate of return that should be applied to it over the term of an access agreement. This would:

- put the negotiating parties on a much more even footing;
- focus the parties on elements of pricing other than RAB and WACC;
- allow the parties to also focus more on non-price terms; and
- generally reduce significantly the scope for disputes between the parties.

2.3.3 The timeframes in the Code facilitate undue delays in reaching access agreements

The current drafting of the Code raises many issues about the timeliness of the negotiation and arbitration process. We understand that CBH's main submission contains numerous details of existing problems and provides suggestions for improvement.

The problems experienced under the regime can be understood in the context of the strong bargaining position enjoyed by the railway owner. In situations where there is a risk that arbitration will lead to lower access prices, the access provider will have strong incentives to delay entry into negotiations, extend the negotiation period, or to draw the process out indefinitely. Delays of this kind are costly to access seekers. Delays affect the flow of revenues from operations that rely on access, and create uncertainty. This increases the prospects of access 'agreements' that favour the access provider.

Given the incentives for asset owners to delay or hinder access, strong (and relatively short) time limits should be placed on the entire negotiation and arbitration process, with the parties given the option of initiating an arbitration process upon expiry of these timeframes, if no agreement has been reached by such time.

2.3.4 The Regulator should have a role in facilitating mediation of disputes

The Code currently provides very little structure around any formal negotiation processes and the Regulator has a very limited role in helping to progress access negotiations.

There are a number of examples of where, under a negotiate-arbitrate framework, a third party such as the regulator has a greater involvement in guiding negotiations.

6 See discussion in Section 3.

- The Federal Court may refer parties to assisted dispute resolution (ADR). This typically involves mediation as an alternative to a judgement. Mediation is a structured negotiation process in which an independent mediator, assists the parties to identify and assess options and negotiate an agreement to resolve their dispute.[7]
- The ACCC played a much more active role in the Hunter Valley network access undertaking. The ACCC considered the views of all parties, undertook its own analysis, and arrived at a position on what would be 'appropriate' for the Hunter Valley Access Undertaking to incorporate.
- Prof. Stephen Littlechild shows that the Federal Energy Regulatory Commission (FERC) in the United States plays an active role in rate case negotiations. Littlechild notes that:[8]

  > …FERC's policy is actively to facilitate settlement. To this end, FERC Trial Staff provide an initial analysis (known as "top sheets") of the pipeline's rate filing 90 days (3 months) after the suspension order is issued. This is usually close to what Trial Staff's formal filed testimony would be in the event of a hearing. Trial Staff then convene a series of settlement conferences with the pipeline and the intervenors to explain their initial analysis and to encourage parties to negotiate and agree a settlement, which is typically somewhere between the pipeline's rate filing and Trial Staff's initial analysis.

  Littlechild has gone further expressing the view that regulators' role in access negotiations could involve not only encouraging negotiations, structuring the discussions and clarifying the issues at dispute but also "taking initial decisions on the less critical issues, insisting that the parties get round the negotiating table, giving a lead on what is or is not likely to be acceptable, taking a firm line where necessary with the regulated entity, and not allowing discussions and negotiations to drag on."[9]
- In the Queensland rail access regime, the Queensland Competition Authority can refer disputes to independent mediation (before stepping in to arbitrate disputes).

We consider that the Regulator could play a much more central role than it does at present in facilitating negotiations and ensuring that asset owners (who enjoy disproportionately high bargaining power) do not undermine negotiations as a way of delaying competition or extracting an inefficiently high access price (which would have the effect of deterring future access seekers). Specifically, the Regulator could either take on a direct mediation role in the event of disputes

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7 See: http://www.fedcourt.gov.au/case-management-services/ADR/mediation

8 Littlechild, S. (2012), The process of negotiating settlements at FERC, Energy Policy 50, pp.174-191.

9 Bordignon, S., Littlechild, S. (2012) 'The Hunter Valley Access Undertaking: elements of a negotiated settlement', April 2012, EPRG Working Paper 1206.

between the parties, or refer disputes to an independent mediator (as in the Queensland rail access regime).

2.3.5 The Regulator should be giving arbitration responsibilities

At present the Code specifies that the arbitrator must be chosen from a panel established by the Regulator, but the Regulator may not be included within that panel. This means that the Code effectively prohibits the Regulator from acting as the arbitrator of unresolved disputes.

In our view, it would be more appropriate for the Regulator to act as the arbitrator. This is consistent with the approach taken in a number of other industries and jurisdictions and, as discussed in the next section, would allow the Regulator to provide helpful guidance to the parties to achieve an appropriate negotiated outcome.[10]

If either party is unsatisfied by the Regulator's arbitrated decision (either in terms of the merits of the decision or in terms of the process followed), that party should be allowed to appeal the Regulator's decision to an expert body (such as the Courts or an independent tribunal). This would ensure the parties' recourse to the judgement of an independent body, and would also provide some discipline on the decision-making of the Regulator.[11]

2.3.6 The Regulator should have responsibility for developing pricing principles or benchmark tariffs to guide negotiations

In addition to assuming arbitration powers, the Regulator could be given the responsibility of developing Pricing Principles that set out how it would establish an access price in the event of a dispute. These Pricing Principles would need to be sufficiently detailed that the parties could anticipate with reasonable certainty the outcome of an arbitration, if the process were to proceed to that point.

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10 If the Regulator did not also act as arbitrator, any guidance the Regulator issues to aid negotiations may impinge on the independence of the arbitrator.

11 Independent review, even if somewhat limited in scope, is adopted in most access regimes and was found by the Panel appointed by the Standing Council on Energy to be beneficial:

"We are convinced of the contribution that merits review can make to better regulatory decision making, and, more specifically, we consider it to be an important component of a system of checks and balances that supports the independence of delegated regulation."

See Yarrow, Tamblyn & Egan (2012), *Review Of The Limited Merits Review Regime,* Stage 2 report, available at: https://scer.govspace.gov.au/files/2012/10/Review-of-the-Limited-Merits-Review-Stage-Two-Report.pdf

The Regulator could potentially apply the Pricing Principles before a negotiation commences in order to provide a reference access price to aid the negotiations. This approach is used in other jurisdictions. For example, the ARTC regime currently establishes a benchmark access tariff for standard services in order to guide negotiations, and the QCA considers reference tariffs proposed by access providers. The Regulator could adopt a similar arrangement in WA. This arrangement would provide a better, more useful anchor to negotiations than the ceiling price under the existing Code.

2.4 Comparison with Queensland rail access regime

Many of the improvements to the Code that we have recommended in section 2.3 are consistent with features of the Queensland rail access regime. As in WA, rail services in Queensland may be declared through a legislative process. Railway owners must grant access to any parties that seek access to declared services. In addition, the Queensland regime is based on a negotiate-arbitrate model.

Under the Queensland Competition Authority Act 1997 (QCA Act), which gives effect to the Queensland rail access regime:

- There is no requirement on access seekers to demonstrate that they have managerial and financial ability.
- Access providers and access seekers have equal, and largely unfettered, rights to lodge an access dispute with the Queensland Competition Authority (QCA).
- If a dispute is lodged with the QCA, the QCA may refer the matter mediation (i.e. the regulator has a role in facilitating mediation).
- If the dispute proceeds to arbitration, the QCA must act as the arbitrator by making a written access determination.
- The QCA may, by written notice, require the owner or operator of a declared service to give the QCA a draft access undertaking for the service within a specified period (usually 90 days, with the possibility of extension at the QCA's discretion). The primary purpose of the undertaking is to provide additional detail of the terms on which an owner or operator of a service undertakes to provide access to the service. By this means, the undertaking provides a guide to the negotiation of access agreements. In Queensland, the owners have voluntarily submitted draft access undertakings to the QCA.
- The QCA must then consider any undertaking submitted, and may either approve the undertaking if it satisfies certain conditions set out in the QCA Act, or refuse to approve the undertaking. If the QCA refuses to approve the undertaking, it must ask the owner or operator of the declared service to amend and resubmit its draft access undertaking for further consideration.

The consideration of draft access undertakings is carried out through a transparent, public consultation process.

- The QCA may require the access provider to provide the access seeker with a reference tariff. A reference tariff is defined as a price, or formula for calculating a price, that has been approved by the authority to set the basis for negotiation of the price for access to the service under an access agreement. In Queensland, the draft access undertakings have included reference tariffs, which are based on the asset owner's proposed revenue requirement and volume forecasts. The QCA has concluded that an assessment of reference tariffs…[12]

  > …requires, amongst other things, a determination of Aurizon Network's efficient costs, that the tariff structure is efficient, and of what return on investment is commensurate with the regulatory and commercial risks involved in service provision. An assessment is also required as to whether the proposed tariffs provide incentives for cost reductions or otherwise improve productivity.

  When developing its draft access undertaking, an access provider does in principle have flexibility over its proposed approach to various pricing elements (such as the RAB or WACC). However, large, unjustified changes in approach or in the pricing elements themselves are unlikely to be approved by the QCA. Hence, in practice, the access provider has tended to take a fairly consistent approach to these pricing elements over time. For instance, Aurizon's 2010 final undertaking (i.e. the undertaking that approved by the QCA) specified: that opening asset values would be determined using a Depreciated Optimised Replacement Cost (DORC) approach; and a methodology for rolling that DORC value forward over time. Aurizon's latest draft undertaking applied that approach to asset values faithfully.

Based on the experience of rail access regimes in other jurisdictions, there is support for many of our recommended improvements to the Code.

2.5 Recommendations for improving the Code

We consider there is scope for improving the effectiveness of the access regime under the Code by:

- Giving the Regulator the responsibility for arbitrating access disputes. The Regulator's decisions may then be appealable to an independent expert body by either the access seeker or the railway owner.
- Providing the Regulator with a role to facilitate mediation of disputes (or the ability to refer disputes to an independent mediator), prior to arbitration. The availability of mediation within the negotiation stage, could help

12 QCA, Aurizon Network's 2013 Draft Access Undertaking: Consultation Paper, August 2013.

counterbalance the much stronger bargaining position enjoyed by the railway operators and ensure that negotiations are undertaken fairly.

- Limiting the scope of negotiations by having the Regulator determine certain pricing elements, such as the relevant RAB value and WACC, in advance of negotiations commencing.
- Having the Regulator develop Pricing Principles that would provide guidance to the parties on how it would arbitrate a settlement if the parties proceed to that point.
- Having the Regulator conduct a first-stage application of those Pricing Principles to derive an indicative access price to guide the negotiation process. This would be a far more helpful guide than the ceiling price under the existing Code. The parties need not be bound by the indicative access price when engaging in negotiations.
- Ensuring that the timeframes in the Code do not allow undue delay by the access provider.
- Reducing the obligations that access seekers must satisfy before they can seek arbitration. The current obligations are overly burdensome on access-seekers and appear to be designed to deter frivolous behaviour that access seekers have very little incentive to engage in.

3 Simplifying the relevant capital cost calculations

3.1 Overview of current practice

The WA regime requires the ERA to establish costs relevant to the floor and ceiling price tests described in clauses 7 and 8 of Schedule 4 of the Code. Access prices are negotiated between these bounds by the access provider and access seeker.

The floor price test in clause 7 of Schedule 4 of the Code specifies that an operator who is provided with access must pay an amount not less than the incremental costs resulting from its operations on that route and use of that infrastructure.

The ceiling price test in clause 8 of Schedule 4 of the Code prescribes that an operator provided with access must pay an amount no more than the total costs attributed to that route and associated infrastructure.

Importantly, Clause 2(4) of the Code specifies that Gross Replacement Value (GRV) is to be used to determine annual capital costs for the price ceiling test. GRV is the lowest current cost to replace existing assets with assets that:

- have the capacity to provide the level of service that meets the actual and reasonably project demand; and
- are, if appropriate, modern equivalent assets (MEAs).

Further guidelines to the railway owner are set out in Clause 13 of Schedule 4 of the Code.

Section 46 of the Code requires a railway owner to submit to the ERA for approval the costing principles that will be applied when determining the floor and ceiling prices referred to in Schedule 4.

3.2 The ERA's issues paper

In its issues paper, the ERA asks whether there a better means of estimating capital costs of a railway than the GRV method.[13]

The ERA raises this issue as it was identified by the NCC, and was a consideration in the NCC's recommendation that the WA regime not be declared effective in 2010. The ERA states that the matter of concern relates to the 'interface' of the WA rail regime and the ARTC undertaking on the interstate

[13] ERAWA issue paper, p. 23.

route at Kalgoorlie. We understand this concern relates to the use of GRV rather than DORC as the asset valuation methodology.

> 9.22 The WA Rail Access Regime is the only regulated industry to adopt GRV, as depreciated optimised replacement cost (DORC) is the widely accepted asset valuation methodology for regulation in Australia....
>
> 9.27 The WA Rail Access Regime is also the only regime to adopt GRV and consistency in national regulation would be promoted with a review, and potentially replacement, of the GRV methodology.[14]

We agree that the GRV methodology should be reviewed. However, as we shall explain, the NCC's reasons for change are misguided. The major flaw in the GRV methodology is not its lack of 'depreciation', as per the DORC method, but the fact that GRV is not ever fixed in time. DORC also has this problem. The fact that the regulatory asset base is not fixed increases the amount of uncertainty and is antithetical to negotiated outcomes.

3.3 The current GRV costing approach is not effectively promoting the objects of the CPA

The CPA provides that a state-based access regime should include Objects clauses that promote the economically efficient use of, and investment in, significant infrastructure.

Further specificity is provided in the CPA on regulated access prices, which should be set so as to:

- generate expected revenue for a regulated service or services that is at least sufficient to meet the efficient costs of providing access to the regulated service or services and include a return on investment commensurate with the regulatory and commercial risks involved;
- allow multi-part pricing and price discrimination when it aids efficiency;
- not allow a vertically integrated access provider to set terms and conditions that discriminate in favour of its downstream operations, except to the extent that the cost of providing access to other operators is higher; and
- provide incentives to reduce costs or otherwise improve productivity.

In our view, using GRV to value assets does not aid the achievement of the first or fourth objectives. It is not relevant to the second and third objectives.

In the following sections, we outline why we consider that the current Code does not effectively promote these objectives.

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14 NCC, *Western Australian Rail Access Regime Application for certification as an effective access regime – section 44M Trade Practices Act 1974 (Cth)*. Final Determination, December 2010.

3.3.1 GRV valuations facilitate returns which are not commensurate with the investment risks involved, and undermine economically efficient use of the infrastructure

We have discussed earlier the notion that GRV is unhelpful to access negotiations because it creates uncertainty about the value of assets used in price ceilings. We also consider that GRV is a flawed method *as applied in the Code* because it allows investors to earn returns on assets that are not consistent with risks faced or investments actually made. In doing so, it allows for prices to be higher than would be needed to encourage efficient use of infrastructure.

The GRV method allows returns that are not consistent with risks faced because railways networks face predictable increases in replacement costs, and these valuation gains are not counted as income when establishing ceiling prices. This will mean that the expected NPV of Brookfield's existing and new investments is greater than zero.

In a highly simplified setting, it is easy to show that GRV can be consistent with recovery of efficient costs (and no more). A 'one off' GRV valuation which is accompanied by a long run commitment to that valuation through the use of a flat annuity over the life of the asset does not result in excessive (or insufficient) returns.

However, the Code does not implement GRV in this fashion. Rather, it allows for regular updating of valuations, a new set of annuities and so consequently allows for windfall gains or losses to the access provider with the passage of time.

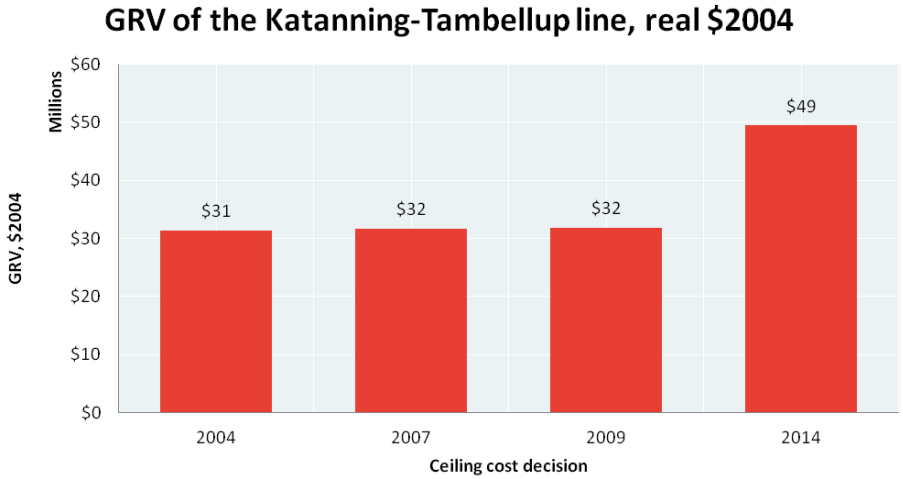
This concern is far from a theoretical one. A study of the path of GRVs over the course of the last 10 years demonstrates that significant unaccounted-for increases in income can be justified using the GRV methodology – even in the event that Brookfield has not invested a single new dollar in the relevant rail network. In Box 2, we highlight that on one particular grain line, the (ceiling) capital charge associated with the line has increased by around 4 per cent a year in real terms and is expected to result in a cost over-recovery of over 40 per cent compared to the initial GRV value. Of course, the initial GRV value could well be far in excess of the actual acquisition and investment cost in the rail line in the first instance.

Box 2: Example of cost over-recovery

Price ceilings have been determined for Brookfield's lines since 2004. In this illustration, we use the is the Katanning to Tambellup line and the 2004, 2007, 2009 and 2014 ceiling values to show that Brookfield will recover more than 40% over the initial (average) 30 year investment foreseen in 2004 due to ongoing GRV increases.

The following chart shows the GRV determinations, in real 2004 dollars (the annuities are calculated in real terms, and so do not include a return for inflation).

Figure 1 GRV estimation in constant $2004, Katanning-Tambellup line



The decisions between 2004 and 2009 were essentially sufficient to compensate for inflation; however, the 2014 decision now results in a substantial increase in the asset base for pricing purposes.

This translates into capital cost annuities and ceiling prices that have grown significantly over time.[15]

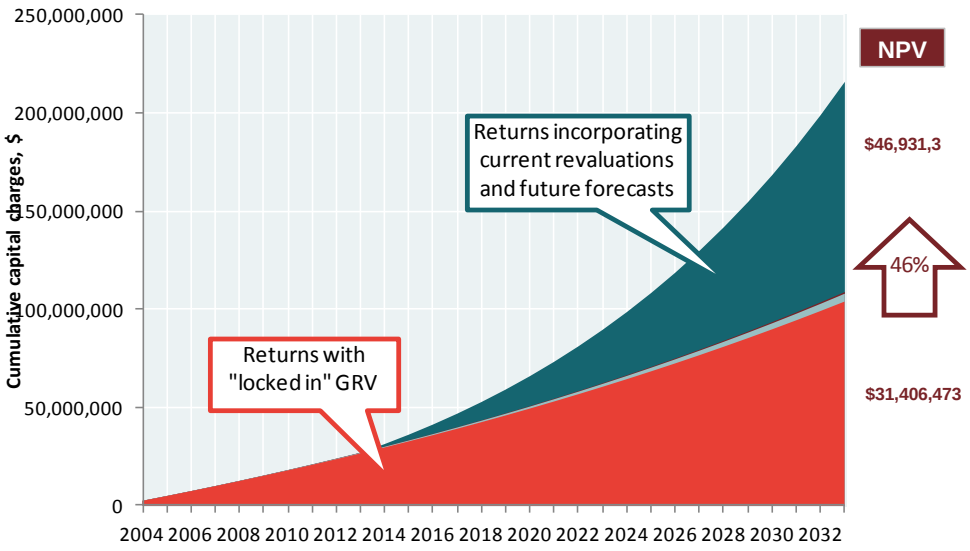
In the following chart, we show the difference between a regime that "locked in" asset valuations at a point in time (2004), and the current GRV regime. The locked in asset base is essentially the result of a long term hypothetical bargain between the regulator and the access provider where the access provider is assumed to build the assets as new at the "lock in" point, and then receives returns of the life of the assets sufficient to recover that investment. Comparing this with the current GRV approach demonstrates that – to the extent price ceilings impact negotiated prices – actual returns will be far in excess of those that were necessary to get the assets built in the first place.

Cumulative recovery of the GRV is shown the following chart, with revaluations in 2007, 2009 and 2014. The 2007 and 2009 revaluations largely maintained the asset value in real terms – the 2014 value resulted in an overall growth rate of the asset base of 7.3% over the 10 year period. This is well in excess of inflation. The ultimate

15 These are also affected by changes in the WACC value over time. In our comparative analysis in Box 1, we use a constant real WACC of 7 per cent, so that any changes in values represents changes in asset valuation rather than WACC.

result is that the NPV of the asset base allows for a 46 per cent over-recovery of the efficient costs of the asset as hypothetically constructed in 2004 and lasting for 30 years (until 2034). In an environment where railway lines are natural monopolies, this excessive return serves little purpose other than to transfer income between the access provider and access seeker.

Figure 2 Cumulative cost recovery using GRV (with revaluation), Katanning-Tambellup



Note: The WACC is normalised to 7% for all calculations

Source: Frontier

3.3.2 GRV does not promote efficient investment

In access regulation, a primary reason given for the GRV methodology (or indeed any asset valuation methodology that involves periodic revaluation of assets), is to send 'build or buy' signals to access seekers. Specifically:

- If the price at which the access seeker can build its own infrastructure is lower than the GRV, a rational strategy for the access seeker would be build.
- If the price at which the access seeker can build its own infrastructure exceeds the GRV, a rational strategy for the access seeker would be buy access.

An access regime that exposes access seekers to build or buy signals can be appropriate if there is a realistic prospect that infrastructure-based competition will emerge (e.g. if the market is highly contestable, with low or costless barriers to entry and exit). However, if in reality the incumbent is a natural monopoly, the prospects of access seekers building alternative infrastructure are very low.

Further, if an access seeker were actually to duplicate the infrastructure of a natural monopolist, that investment would, by definition, be inefficient. This is because a naturally monopolised market is one in which it is efficient for only a single supplier to meet all demand.

The rail networks in WA regulated by the Code are networks that have strong natural monopoly characteristics and, therefore, are not contestable. For instance, there is no possibility of bypass of Brookfield's grain lines by any alternative rail provider, so a ceiling price of GRV does not inform any relevant investment decision. There is simply no rail-relevant build-buy decision for assets subject to the Code.[16]

The WA Government's supplementary submission to the NCC's assessment of the WA Access Regime acknowledges that the railway lines subject to access arrangements under the Code are natural monopolies:[17]

> The State considers that, although it may be in [Roy Hill]'s own commercial interests to construct a railway, this does not diminish the natural monopoly characteristics exhibited by the railways currently covered by the Regime...

In other words, **if the regime produced an incentive for access seekers to build alternative infrastructure, such investment would be inefficient.**

Whilst prioritising a "build or buy" incentive adds very little to investment efficiency, it does allow for large transfers of income. If there is a tendency for replacement costs to increase over time, as there is in the case of the railway networks subject to the Code, then these transfers will tend to be from access seekers to asset owners. The replacement costs of existing railway networks tend to rise over time because these major costs of railways are civil work such as earthworks and tracklaying (see Table 1). These costs increase over time because the cost of labour in Australia generally rises over time.

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16 It is feasible that use of GRV could encourage bypass of the rail network onto road. This would occur if the GRV ceiling (plus haulage) were higher than the price of road transport. However, there are two reasons why bypass of this form would lessen, rather than promote, efficiency: this is determined by the mode that imposes the lower marginal social cost. Rail is highly likely to have a much lower marginal social cost because (1) rail tends to have lower marginal costs (per GTK) than road, although this will depend on the specific road and (2) road freight may impose negative externalities in relation to road congestion, accidents, noise and other kinds of pollution.

17 Government of Western Australia, *Certification of the Western Australian Rail Access Regime Further Submission to the National Competition Council*, October 2010, p. 3.

Table 1: Summary of GRV Outcomes for Routes Relevant to CBH's Proposal

Route / GRV ($)	Earthworks	Ballast	Sleepers	Rail & Turnouts	Tracklaying	Bridges & Culverts	Signals Comms [a]	Miscellaneous [b]	DPCM	Finance Cost	Total GRV
Avon Yard - West Merredin	[redacted]										
West Merredin - Koolyanobbing East	[redacted]										
Koolyanobbing East - West Kalgoorlie	[redacted]										
West Kalgoorlie - Kambalda	[redacted]										
Kambalda - Esperance	[redacted]										
Avon Yard - York	15,104,116	3,192,543	5,107,502	5,689,507	5,994,707	10,894,957	2,866,546	844,622	9,938,900	1,385,064	61,018,463
York - Narrogin	55,322,856	11,656,257	18,796,651	27,322,181	21,952,678	11,947,139	6,524,597	2,605,844	31,225,641	4,616,378	191,970,222
Narrogin - Wagin	20,365,455	4,287,559	6,948,617	10,141,602	8,081,222	3,858,962	1,448,538	901,751	11,206,741	1,719,431	68,959,880
Wagin - Katanning	22,989,103	4,799,395	7,884,771	16,707,534	9,122,312	2,699,270	3,614,607	1,023,941	13,768,187	1,819,557	84,426,677
Katanning - Tambellup	18,108,868	3,793,448	6,221,663	11,184,464	7,185,785	2,925,806	1,319,988	789,886	10,301,982	1,468,159	63,280,050
Tambellup - Redmond	47,727,695	10,023,507	16,411,128	22,063,386	18,936,840	3,596,605	4,330,586	2,410,025	25,100,355	4,037,729	154,639,857
Redmond - Albany	10,792,611	2,276,336	3,726,158	6,375,180	4,282,619	1,245,808	3,405,492	565,724	6,533,986	884,439	40,088,352
Narrogin - Yilliminning	9,454,644	979,166	3,039,974	4,776,833	3,751,700	1,203,610	356,274	440,212	4,800,863	448,705	29,254,000
Yilliminning - Bruce Rock	58,775,973	6,087,104	18,898,377	29,708,211	23,322,910	7,482,391	2,214,824	2,736,633	29,845,285	2,789,431	181,861,139
Bruce Rock - West Merredin	19,431,063	2,012,368	6,247,715	9,821,396	7,710,446	2,473,644	732,210	904,718	9,866,712	922,173	60,122,446
Yilliminning - Kulin	39,283,573	4,068,603	12,640,669	20,304,988	15,588,126	2,977,047	2,227,820	1,795,259	19,777,217	670,940	119,334,241
Wagin - Lake Grace	47,541,083	9,996,582	16,739,616	22,687,036	18,864,790	6,642,774	1,766,922	2,088,554	25,285,471	1,722,381	153,315,210
Lake Grace - Newdegate	26,619,926	4,940,334	9,416,643	14,786,312	10,563,060	2,084,982	510,367	1,253,962	14,035,117	944,154	85,154,858
Lake Grace - Hyden	37,355,976	7,844,634	13,221,586	18,682,102	14,823,235	3,601,167	232,246	1,472,837	19,486,759	661,086	117,581,641
West Merredin - Kondinin	58,944,708	6,100,949	18,961,326	34,179,930	23,552,546	3,837,260	460,550	2,416,597	29,690,773	2,014,511	180,159,150
Avon Yard - Goomalling	22,066,574	4,703,886	7,508,104	11,412,233	8,797,819	10,096,150	3,338,912	1,136,226	13,812,361	1,182,434	84,056,720
Goomalling - McLevie	57,843,525	12,221,597	19,649,560	30,858,061	22,952,905	5,767,739	3,597,073	2,429,445	31,063,981	3,011,847	189,395,732

Source: Excerpt from ERA, Brookfield Rail Determination of Costs Relevant to Co-operative Bulk Handling's Access Proposal dated 10 December 2013, 30 June 2014, Table 4

Therefore the regime currently facilitates large transfers of income (at least relative to the actual investments made).

The regime, by allowing for regular updating of GRV, is also incompatible with the 'financial capital maintenance[18]' standard, which underpins the regulatory asset base (RAB) models of utility regulation used in Australia. This incompatibility, which could be justified only if a build or buy-decision were relevant, here serves no useful purpose.

In fact, the consequence of the GRV approach (in the context of rising replacement costs) would be to deter either new entry or expansions by access seekers, and thereby not promote the efficient use of infrastructure. This undermines the overarching purpose of the access regime: to promote "effective competition in upstream or downstream markets".

3.3.3 GRV is unnecessary to protect the legitimate financial interests of access providers

Railway line owners have previously argued that a change away from the GRV approach to asset valuation is likely to have serious adverse effects on their financial interests. In respect of this argument, we make two observations:

18 Financial capital maintenance ensures that firms have an *ex ante* expectation that they will receive their invested capital plus a reasonable return on that capital. This implies that depreciation acts as the 'return of capital', with the RAB only changing over time for depreciation and new capital expenditure.

- Firstly, if the financial interests of access providers are reliant upon income transfers from access seekers, deterioration in those financial interests should not be a relevant consideration to the setting of access prices.
- Secondly, the legitimate financial interest of the access seeker would not be adversely affected if the alternative to the GRV approach satisfies the principle of financial capital maintenance. In other words, if access prices are set in such a way as to allow the owner to recover its initial investment in the asset, and a fair return on that investment, the asset owner should be able to meet all its costs (including the opportunity cost of funds of its investors). Access prices based on increasing GRVs over time would lead to over-recovery of the asset owner's initial investment (including a commercial return that is commensurate with risks) and, therefore, inefficient over-compensation to the access provider's investors.

3.3.4 Using updated GRV is inconsistent with other rail (and other industry) capital costing approaches used in Australia

The ERA notes that the NCC's decision on the certification of the WA rail access regime in part hinged on the inconsistency between the GRV approach and the asset valuation method used in other rail jurisdictions.[19]

The NCC stated that (9.22):

> The WA Rail Access Regime is the only regulated industry to adopt GRV, as depreciated optimised replacement cost (DORC) is the widely accepted asset valuation methodology for regulation in Australia.

In our view, the NCC's emphasis on the use of GRV rather than DORC is questionable. As the ERA has already shown[20], the differences between GRV and DORC are not material in most circumstances. The real issue that is not touched on by the NCC is that the WA rail regime is an **outlier because it allows ongoing revaluations of the asset base**.

Problems associated with asset revaluation are now widely recognised by regulators in Australia:

- The undertaking submitted by ARTC in relation to the Hunter Valley rail network used DORC asset valuations, but the asset base is now fixed and new capital expenditure is rolled into the regulatory asset base at cost. This is

19 ERA, para 48.

20 As discussed in documents available here: https://www.erawa.com.au/rail/rail-access/regulatory-discussion-papers/gross-replacement-value-vs-depreciated-optimised-replacement-cost

consistent with the ACCC's acceptance of ARTC's interstate network access undertaking in 2008:

> However, the ACCC considers that revaluation should not normally be allowed under a DORC framework, because it creates unnecessary uncertainty, may encourage gaming and increases regulatory costs.[21]

- In Telecommunications, the ACCC which was a long time proponent of a GRV-type asset valuation approach, moved to a building block model with a fixed RAB in 2011.[22]
- In electricity and gas, amendments to national electricity and gas laws through to 2007 have had the effect of eliminating asset re-valuations.

3.4 A 'line in the sand' approach to asset values would achieve better the objects of the CPA

In our view, moving from a periodic revaluation approach such as GRV to a 'line in the sand' approach to asset values is likely achieve better the objects of the CPA. Under the 'line in the sand' approach, no periodic revaluation of the asset base would occur going forward; rather, an initial asset value would be established by some suitable method, and that value would fall over time as assets are depreciated, and rise over time as new capital expenditure is incurred.[23]

Whilst moving to a line in the sand approach may have short-run transitional costs it is very likely to be worthwhile in the long-run. There would be several benefits to adopting a line in the sand approach:

- It would remove asset valuation as a source of dispute between access seekers and asset owners, thus simplifying greatly the negotiation process between the parties. This would likely lead to more negotiated outcomes.
- It would also remove a source of information asymmetry between the parties (since railway owners typically have better information about their own assets than do access seekers). This would level the playing field between the parties and lead to more efficient negotiated outcomes.

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21 ACCC, *Draft Decision Access Undertaking – Interstate Rail Network Australian Rail Track Corporation*, 2008, p.143.

22 ACCC, *Review of 1997 Guide to Telecommunications Access Pricing for Fixed Line Services: Draft report* September 2010

23 If the a real WACC were to be applied to the asset base in order to calculate a return on capital, then it would also be appropriate to index the asset value to inflation, in order to ensure that investors' returns are not eroded over time by inflation.

- It would move away from a regime that, at least in principle, tries to encourage inefficient duplication of natural monopoly infrastructure (by sending inappropriate build-buy signals to access seekers).
- In a world of rising replacement costs, it would prevent inefficient income transfers from access seekers to access providers.
- It would ensure that rising replacement costs would not deter access seekers. As such, a move away from a GRV approach is likely to meet the overarching object of the CPA, which is to promote "effective competition in upstream or downstream markets".

This approach is also consistent with observations that have recently been made about the objectives of a regulatory framework. One useful method for thinking about the regulatory framework is that it should be designed in such a way as to re-create the long-term contract that the parties would have negotiated if they could have costlessly negotiated prior to making any sunk investment.[24]

In our view, no access seeker would reach a long-term access agreement which allowed for ongoing revaluation of the asset base upon which prices would be based. This view is also supported by economic experts used by the New Zealand Commerce Commission in their consideration of asset valuation issues:

> ...regulation itself is often analysed in terms of the regulator acting as a 'buyer' for end consumers, and further acting as a buyer with market power. As noted above, it is possible to envisage workably competitive markets in which, because of asset specificity, buyers have ex post market power, but in which ex ante contract competition is sufficient simultaneously (a) to protect consumer interests against seller market power, and (b) provide [financial capital maintenance] for suppliers in relation to the specific risk of ex post buyer opportunism (and hence maintain investment incentives)...This corresponds to the asset valuation adjustment process in a workably competitive market in which long-term supply contracts are struck in conjunction with each new tranche of investment. *Asset values in such circumstances tend to be heavily influenced by historic costs (i.e. the replacement cost of each tranche of new investment, as estimated at the time the investment is made),* although again the degree of influence is affected by the nature of any indexing provisions.[25]

Finally, we note that a fixed asset base would not undermine the negotiated nature of outcomes as:

- There would still be floor and ceiling prices in order to guide negotiations. Indeed, an asset base that is not subject to large, periodic revaluations over time would likely mean that the gap between the floor and ceiling will tend to

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24 Biggar, Darryl (2011) *"Why regulate airports? A re-examination of the rationale for airport regulation"* Submission: to the Productivity Commission Economic Regulation of Airport Services: Issues 15. Paper: January 2011

25 Yarrow, Cave, Pollitt and Small, *Asset Valuation in Workably Competitive Markets: A Report to the New Zealand Commerce Commission*, May 2010, p. 21.

be narrower than under a GRV approach. A narrower range would be more useful in guiding negotiations.

- There would still be a number of other important price and non-price terms over which to negotiate.

3.5 A line in the sand approach to asset values can be implemented in practice

In our view, it is practicable to implement a line in the sand approach to asset values, not least because a move from periodic asset revaluation to a line in the sand approach has been implemented successfully in a number of other regulated in Australia, including the telecommunications sector, and NEM region electricity networks.

We recognise that moving to a line in the sand approach will require the regulator to have an ongoing role in recording the regulatory value of assets (i.e. via a set of regulatory accounts). This will require certain changes from the current regime. However, in terms of the overall net burden on the regulator (and regulated firms), it is far from clear that this approach would be more burdensome than the current approach.

The most significant challenge in transitioning to a line in the sand approach is deciding on an appropriate 'opening' asset value (i.e. the value at which the line should be drawn). There are three possible approaches:

- **Adopt the current GRV:** This would be the simplest approach as the latest GRV could be adopted as the starting asset value. However, a major disadvantage with this approach is that it would lock in the value of a completely new hypothetical network, even if the existing network has in fact been in place for many years and has therefore been depreciated significantly. While such an approach could be used, new investment would not be allowed into such an asset base.
- **Adopt a DORC value:** One approach to overcoming the limitation identified above is to adopt a Depreciated Optimised Replacement Cost (DORC) valuation. This would involve adjusting the GRV using a suitable measure of depreciation (e.g. based on assumed residual asset lives). This would ensure that the asset value reflects the fact that investors would have already recovered some of their initial investment in the asset. It would allow new efficient capital expenditure to be rolled into the asset base and ensure these costs could be recovered.

  This is the approach that has been adopted by Aurizon (formerly Queensland Rail) in its access undertakings in Queensland. The initial asset value was established on a DORC basis. This value is rolled forward by indexation to CPI. In addition, disposals and depreciation (approved by the QCA) is

deducted, and new prudent capital expenditure (approved by the QCA) is added to obtain the closing asset value. Aurizon updates asset values every year. Once these values have been approved by the QCA, Aurizon notifies these publicly.[26]

- **Adopt a past asset valuation, suitably rolled forward:** A third option would be to take a past asset valuation and to roll this forward so as to ensure investors receive a reasonable return on their actual investments. Although historic cost could be used, given the current age of railway assets and changes in ownership, a better base valuation might be the initial cost at which the asset owner acquired the assets in the past. If there is a concern about the decline in real value of the asset, the value could be indexed to the present day using a suitable inflation index. (This value would also be adjusted for depreciation and new capital expenditure.) This would reflect much more closely than either the DORC value or GRV to the asset owner the actual value of the rail infrastructure. Therefore, use of that value would be most compatible with the concept of financial capital maintenance.

We note that a line in the sand approach would not necessarily lead to lower access prices in the short term. This ultimately depends on the method of asset valuation that is used to determine the initial RAB and the remaining asset lives.

Going forward, there would not be significant effort required in updating the asset value. The value of depreciation to be removed from the asset base may be calculated in the same way as is done in many other regulated sectors: by applying a schedule of (actual or assumed) asset lives, and a depreciation rule, to calculate the return of capital.

Any increases in the asset base (e.g. due to asset replacement or network augmentation) could be effected by requiring the asset owner to submit all relevant capital expenditure. In order to ensure that the asset owner does not inflate the asset base inefficiently (i.e. by investing more than is required), the expenditure rolled into the asset base also could be subjected to an efficiency test by the Regulator or via agreement with access seekers.

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26 See Queensland Rail Network's 2010 Access Undertaking, Schedule A: Maintenance of Regulatory Asset Base.

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