frontier economics

7 MARCH 2019

RESPONSE TO TREASURY CONSULTATION ON WA RAIL ACCESS REGIME

PREPARED FOR CBH GROUP

Disclaimer

CONTENTS

Figures

Boxes

1 INTRODUCTION AND OVERVIEW

1.1 Consultation on the rail access regime

We have been engaged by CBH Group to assist it with the preparation of submissions to the WA Department of Treasury's (Treasury's) review of the Western Australian (WA) rail access regime.

The WA rail access regime is established by the *Railways (Access) Act 1998* (the Act) and the *Railways (Access) Code 2000* (the Code). The object of the 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."

In August 2017, Treasury initiated a review of the entire WA rail access regime and released an Issues Paper calling for public submissions.

In November 2018, Treasury released a Draft decision paper.[1] Treasury seeks specific feedback on each draft recommendation and, where the draft recommendation is not considered to be suitable, to provide reasons and alternatives.

1.1.1 Purpose of the consultation and review

It is important to consider the recommendations of Treasury in light of the purpose of the review. Treasury states that the overarching purpose has been to consider:

> *…how it should be improved so as to better achieve its objective of encouraging the efficient use of, and investment in, railway facilities by facilitating a contestable market for rail operations.*

Treasury has further developed "underlying goals" to target the broader objective:

[1] Department of Treasury, *Review of the Western Australian Rail Access Regime: Draft decision paper*, November 2018 (Draft decision paper).

• A successful negotiation within the Regime should result in efficient access prices that reflect what would be achieved in a competitive market for rail facilities, allowing for an appropriate return on investment for railway owners.

• The Regime should enable access seekers and railway owners to arrive at a commercially negotiated agreement that reflects the terms, conditions and risks specific to their access arrangements.

• The Regime should maximise the efficiency of the regulatory process, aiming to reduce the net cost of the Regime by reducing the time and money that railway owners, access seekers and the Regulator spend in applying the Regime.

In addition to these goals, Treasury has also considered whether any of the proposed changes to the Regime could affect the likelihood that the Regime will be re-certified as an 'effective' access Regime by the Commonwealth Treasurer in accordance with the 1995 Competition Principles Agreement.

1.2 CBH's request

CBH Group has specifically asked us to consider Draft recommendations 1A, 1B, 2 and 3, which address the pricing mechanisms.

These recommendations are as follows:

- **Recommendation 1A**: Change to the asset valuation methodology to a building block based on an initial DORC valuation and align the floor and ceiling cost calculations with the DORC method
- **Recommendation 1B**: Allow for flexibility in the assessment of historical depreciation to manage transitional impacts of on existing railway owners
- **Recommendation 2**: Require railway owners to publish a standing offer for defined rail tasks when required by the ERA
- **Recommendation 3**: Introduce a competitive imputation pricing principle as a part of the pricing principles set out in Clause 13, Schedule 4 of the Code

In this paper, we analyse the recommendations and provide further suggestions for improvement.

2 RECOMMENDATION 1A: THE DORC VALUATION APPROACH

2.1 The recommendation

Draft recommendation 1A is to:

> *Change the asset valuation methodology to a DORC method and align the floor and ceiling cost calculations to a building block methodology with an initial DORC valuation.*

In broad terms, we agree with many aspects of Treasury's analysis in support of this recommendation; and we consider that DORC has been commonly used to value assets where there has been little information available to support other methods (as we discuss below).

Treasury lists the following concerns with the existing GRV method:

- prices resulting from GRV may exceed efficient costs of access[2]
- GRV does not provide realistic guidance for negotiations because it is hypothetical and may bear little resemblance to actual costs[3]
- GRV does not provide incentives for investment, for example in extensions or expansions of capacity.[4]

We broadly agree with these assessments.

We further note that a further reason that GRV does not assist negotiation (and leads to excessive costs) is that it allows for continual asset revaluations. As we have noted in our previous work for CBH, any approach to asset valuation that does not account for asset revaluation gains[5] as income is not consistent with the access provider making a normal economic profit ("expected NPV = 0") – which is a condition fundamental to economic regulation that seeks to promote efficient investment.

The obvious solution to this problem is to not allow asset revaluations, or "fix" the opening asset value and the value of any future capital expenditure incurred. This removes uncertainty as to the value of assets and provides access providers and access seekers with a clear picture of the capital charges that will be allowable (noting that the timing of capital cost recovery would still need to be determined).

2 Draft decision paper, p. 7.

3 ibid.

4 ibid.

5 A gain in this sense is a situation where the replacement value may have increased from $100 to $110. This $10 will eventually be recovered in higher depreciation charges, and higher returns on capital are also earned.

Although it is not the only meaning[6], fixing asset values is what is called drawing a "line in the sand" . That is, the "line" is usually taken to mean a date after which no more asset revaluations will be allowed to be undertaken.[7] This is the approach taken, for example, by the Productivity Commission when considering the monitoring of Australian airports.[8] Because drawing a line in the sand merely fixes initial asset values, one can draw a line in the sand whatever method is adopted to arrive at those initial asset values.

2.1.1 The recommendation should fix the opening asset value

The draft decision paper is not entirely clear about whether the initial DORC valuation is fixed. Initial references to the benefits of DORC note that future (re)valuations are not contemplated, for example, Table 2: Summary of costs and benefits: DORC methodology, states:

> *Benefits: Avoids uncertainty about future valuations of the ceiling, since the initial RAB under DORC is 'locked in' when first calculated and then updated each year to reflect depreciation and efficient investment in the asset.*[9]

Equally, the "costs" column of Table 1 on GRV also specifies that GRV valuations create uncertainty because these are re-assessed when agreements are re-negotiated or new access proposals are received.

We further note that it is standard in regulatory regimes, including rail regulatory regimes, for DORC valuations that have been adopted to then be fixed.[10]

However, references on p. 10 and p. 15 of the document to "asset appreciation" in the capital cost and RAB roll-forward equations create some confusion, as future valuation should only be a function of depreciation and new capital investment. Assuming references to asset appreciation were intentional, we assume that the reference is to *indexation* of the asset base for CPI, which is a form of asset appreciation.

---

6 As discussed in Abbot and Kantor (2014) and as reflected in TreasuryTreasury approach, line in the sand has also been used to describe a method based on valuing assets based on the NPV of income earned from current prices. Abbot and Kantor, *Asset valuation of government business enterprises: a re-evaluation of pricing issues*, July 2014.

7 Indeed, it is not the case that building block models always used fixed asset values. Revaluations are consistent with a building block framework where revaluations are accounted for as income. However, it has become convention that assets are not to be revalued with a building block framework, again for the reasons considered. It is important to note, however, that locking in the values intrinsically reduces the economic arguments for a DORC valuation. DORC is an awkward mix of replacement values of assets – which reflect the current value of assets used to provide the service – with the depreciation element reflecting the fact that the assets in service are (mostly) not new and will need to be replaced at some future point.

8 The Productivity Commission said that: "Significantly, most of the airports seem to have accepted that the practice of raising charges on the basis of periodic asset revaluations should not be sanctioned under a future price monitoring regime and, by implication, that a line in the sand on previous revaluations must be drawn. While such a line will inevitably involve an element of 'rough justice', the Commission considers that a cut-off date of 30 June 2005 for revaluations to the monitored asset base represents a reasonable compromise between the competing interests." See Productivity Commission 2006, *Review of Price Regulation of Airport Services*, Report no. 40, Canberra, p. XXIII.

9 Draft decision paper, p. 3.

10 For rail, the ATRC HVAU and interstate networks, and QR and Aurizon's networks all use fixed asset values which are rolled forward. For example, for electricity, see rule 6.2 of the National Electricity Rules which contains the opening regulatory asset values for each of the regulated distribution entities in the National Electricity Market, and a defined roll forward equation.

The indexation approach is standardly used in other regulatory regimes, including rail.[11] Indexing the asset base for CPI maintains the real value of investors' funds. However, one must be careful to ensure that revaluation of that kind is used in conjunction with a real WACC in deriving a ceiling revenue (or, alternatively, if a nominal WACC is used, the indexation benefit is removed). This is required to meet the "NPV = 0" condition, i.e. it would avoid compensating twice for inflation.

In our opinion, the most important recommendation is to fix an opening asset value and not to allow further asset revaluations. This should be clearly articulated in the final decision. If indexation is proposed to be allowed, it should also be made clear this is to be applied in an NPV neutral way.

2.2 Options to fix the opening asset value

The secondary problem is then – how to fix the initial asset value? We agree with Treasury that while it is possible to fix the asset value using GRV, this would not address some of the other concerns about GRV, as raised above. It does not, for example, allow for new capital expenditures to be reflected in amounts recoverable from access seekers.

2.2.1 Two alternatives?

Treasury briefly considers depreciated actual historical cost but dismisses this alternative. It considers in detail two other options to fixing the initial value:

- the DORC approach and
- the "NPV" approach (which it calls the "line in the sand" approach).

After consideration, Treasury also dismisses the NPV approach.

We are not convinced that Treasury's dismissal of actual cost is appropriate. We recognise that information on past asset values may be difficult to acquire, and there would be issues with the efficiency of past investments. However, as we will discuss, these methods also have significant advantages over hypothetical valuations such as DORC.

In our opinion, relying solely on DORC valuations should be avoided for the following reasons:

- Any ORC valuation is inherently complex. While this may have been mitigated to a degree through ERA oversight of GRV estimations, Treasury's proposal is to conduct another ORC valuation.
- DORC will facilitate the over-recovery of costs actually incurred by access providers because it perpetuates historical increases in asset values that were not accounted for as income.

In the two sub-sections below, we expand on the second point.

DORC perpetuates past windfall gains

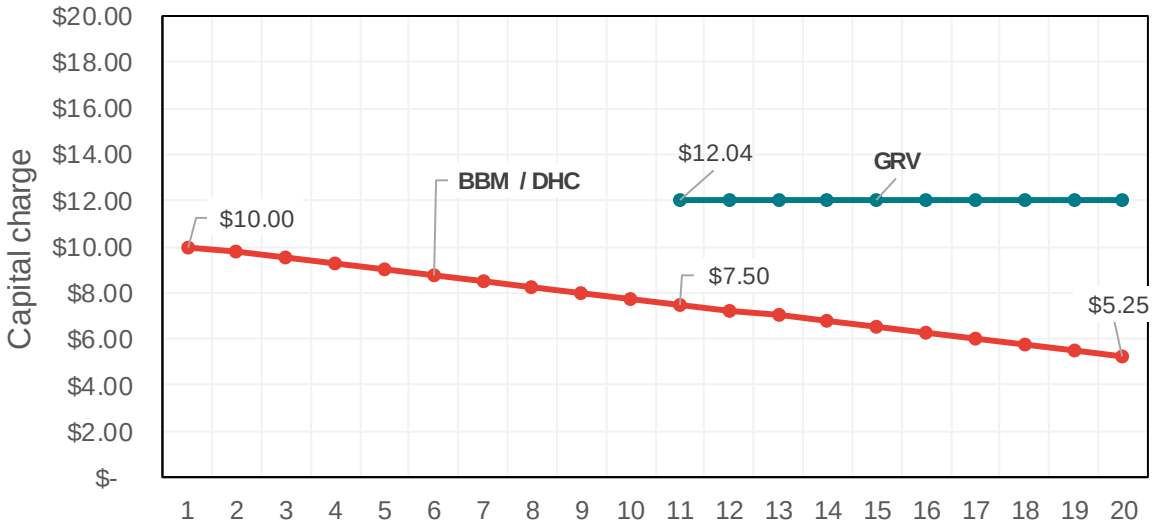
DORC perpetuates the likely windfall gains that have been experienced under the GRV methodology. To consider a simple example, suppose a railway is built which costs $100 and lasts for 20 years. A return of capital of $5 is taken each year and a return on capital applied to produce an NPV of $100 in capital charges. If, as with GRV, the asset is revalued after 10 years at $150 (around 4% a year increase), and supposing a WACC of 5%, the capital charge from the annuity is $12.04.[12] This is already

[11] See, for example, QCA, Decision: Queensland Rail's Draft Access Undertaking, June 2016, p. 281. For electricity, see rule 6.4.3 of the National Electricity Rules.

[12] To be clear, over-recovery was facilitated due to the incorrect use of the annuity method to achieve a return on, and of, capital invested (which was prescribed in the Code). When applied consistently throughout the fixed period over which costs are to be recovered, annuities ensure that the compensation received from annual access charges (in NPV terms) is equal to the

above the capital charge for the 1st year of the conventional building block framework using actual or historic costs – which would be $10 ($5 of depreciation and $5 of return on capital) – let alone the 11th year.

Figure 1: Comparison of GRV with historic cost



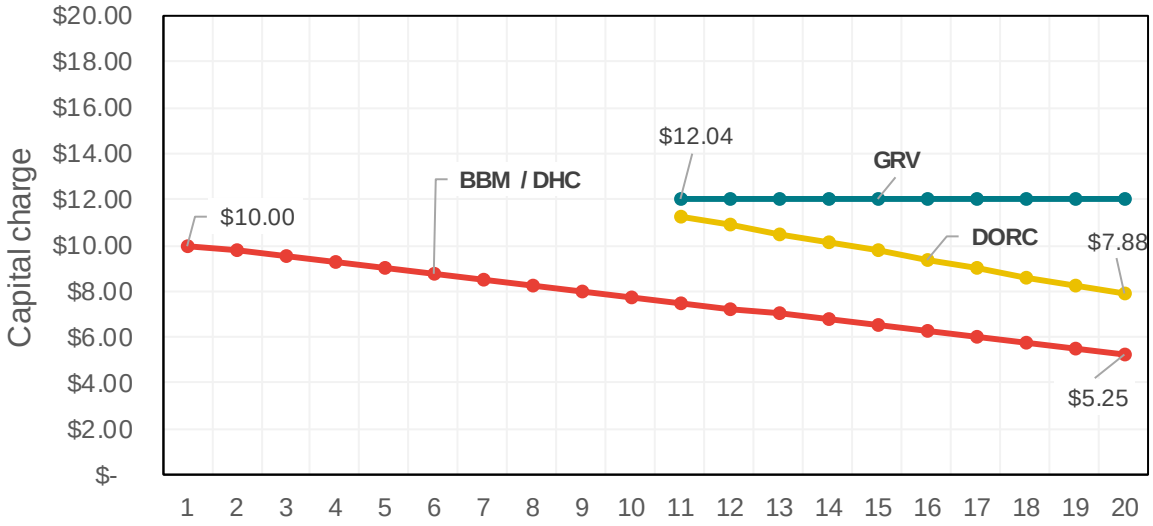
Source: Frontier Economics

Suppose that DORC replaces GRV at year 11. It can be observed that while this lowers ceiling charges relative to GRV (because the assumed straight line depreciation is higher than annuity depreciation), charges remain well above those based on actual costs incurred (inclusive of the opportunity cost of capital).

initial cost of investing in an asset. However, if the annuity is not applied consistently throughout the cost recovery period, cost over- or under-recovery can occur. That is, a flat annuity should only be used if the regulator can commit to allowing the access provider to recover the annuity in each year of the asset's lives.

If MEA replacement costs are increasing over time, and these are reflected in the annuity calculations, this will create revaluation gains for access providers that are not accounted for as income. This will mean that the expected NPV of investments is greater than zero. Where replacement costs are known to be rising, the only way in which the cost of investments could have been recovered was through the use of a backward tilted annuity, which results in an increasing path of cost recovery over time.

Figure 2: Comparison of historic cost, GRV and DORC



Source: Frontier Economics

If Treasury is concerned with ensuring that prices reflect efficient values, without monopoly profits, then it is the lower value which is relevant. We recognise that there is some concern about changes in regulatory regime and losses to access providers (the gap between GRV and DORC above). However, this must be balanced against the interests of users that have overpaid in the past and wish to avoid this being perpetuated into the future (the gap between BBM/DHC and DORC above).

Treatment of fully depreciated assets

A further reason why DORC may overstate efficient costs is that many rail assets in WA are old. This means certain assets held by the access provider which have been fully depreciated; that is, they have had an actual life longer than their expected accounting lives. A DORC valuation will attribute some value to these assets; this is because the assets would be replaced if they did not exist. However, it is questionable whether access providers should receive compensation for investments in assets that have exceeded their accounting lives, as these lives are those on which initial investment expectations would have been developed.

As Treasury may be aware, this issue was explored in some detail by the QCA with respect to Queensland Rail's network. The QCA accepted an asset value for the West Moreton system that was based on a modified DORC approach that attributed a zero value to older assets which were life expired (for example, no value was attached to an asset that was built 70 years ago with an expected useful asset life of 50 years). The QCA's economic expert suggested that compensating for these assets would lead to windfall gains:

> *These are windfall gains as the firm could not have anticipated that there would be other uses for the asset at the time of construction, when its useful life was determined for the purpose of calculating depreciation and expected returns.*[13]

This principle appears to be consistent with the approach taken in Schedule 4 Clause 2 (2) of the Code which implies that investments in cuttings or embankments made prior to commencement of Code could be valued at zero, requiring only assets installed after this date to be included.

2.3 Other options should also be considered

As we have noted, Treasury's approach to "line in the sand" is that it is a specific valuation methodology. This is calculated by taking the NPV of net revenues extrapolated into the future. Treasury does not favour the use of this method, as the suggestion appears to be that it would be harmful to the interests of access providers (for example, it is said to prevent the owner from gaining benefit of increasing utilisation). It is not obvious to us that Treasury has taken account of the opposite concern – that prices or revenue ceilings calculated using the current methodology are above efficient costs. Nonetheless, given past concerns about whether current prices are cost-reflective we tend to agree with Treasury that NPV would not be suitable.

In our opinion, given the weaknesses in DORC valuations described, Treasury should consider three different options for fixing the initial asset value. In our view, each of the three different options for fixing the initial value has merits. The options are:

- DORC
- Depreciated historic cost
- Depreciated cost based on actual capital recovery (depreciated actual cost)

Both the second and third options would set the asset value based on costs actually incurred; this could be the original construction cost or the original acquisition cost of the assets. The difference between the second and third options is that the former relies on accounting treatments of depreciation, i.e. one would consider the asset value as acquisition or construction cost less straight line depreciation whereas the second allows for actual cost recovery – which may differ from the assumed depreciation methodology.

To consider an example, suppose we use the same assumptions as for Figures 1 and 2, although now we assume the access provider has only been able to recover a return of capital (depreciation) charge equivalent to $4 per year. In that case, the respective asset valuations calculated at year 10 would be:

- DORC = $75 (50% depreciation of re-valued $150 asset base)
- Depreciated historic cost = $50 (50% depreciation of $100 asset base)
- Depreciated actual cost = $60 (40% depreciation of $100 asset base).

The key advantage of options two and three is that they connect returns to investors with the amount of capital actually invested in the business, i.e. $100 in the example. Depreciated historic cost applies an assumed depreciation profile (as does DORC), while depreciated actual costs connects the asset value

[13] Prof. Flavio Menezes, *A Regulatory economics assessment of the proposed Western System asset valuation approaches*, 2015. pp. 8-9.

with the unrecovered value of investments. These values would reflect much more closely than either the DORC value or GRV the actual cost of the rail infrastructure. Therefore, use of these values would be most compatible with the concept of financial capital maintenance and the "expected NPV = 0" principle. Further, such an approach would be most akin to the long run contract which users of the assets would be prepared to pay for if such a contract had been able to be struck at the time of investment.[14]

Such asset valuation approaches are indeed in use or have been considered in other regulatory regimes to set initial asset values:

- In the revised National Gas Rules for arbitrations relating to non-scheme pipelines, the arbitrator is specifically required to take into account asset valuations for assets based on the roll forward construction cost value (i.e. construction cost less depreciation plus capex). See Box 1 for further details.
- When the ACCC changed from an ORC/GRV methodology in telecommunications, it used a hybrid valuation approach that took elements of DORC, DHC and NPV (which produced a value in the middle of DORC and DHC).[15]

At the least, we consider these methodologies should also be considered in conjunction with DORC values and the need for transitional provisions.

2.4 Conclusion on the DORC valuation approach

The most important recommendation and valuable recommendation is to fix an opening asset value and not to allow further asset revaluations. Treasury should consider three different options for fixing the initial or opening asset value: DORC; depreciated historic cost; and depreciated cost based on actual recovery; this would provide a better balance between the interests of access providers and access seekers.

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

[15] ACCC, 2011, *Inquiry to make final access determinations for the declared fixed line services*, Final Report, July, https://www.accc.gov.au/system/files/FADs%20for%20Fixed%20Line%20Services%20-%20Final%20Report%20-%20public%20version.pdf, pp. 137-8.

Box 1: Regulation of non-covered gas pipelines

In our opinion, Treasury may wish to take account of changes to the regulation of gas pipelines in recent years. At face value, similar issues relating to the establishment of an effective arbitrate-negotiate approach, including asset valuation, have been faced. In this box we briefly describe these reforms.

In August 2016, the COAG Energy Council directed the Independent Chair of the GMRG, Dr Michael Vertigan AC, to examine the current test for the regulation of gas pipelines, in consultation with stakeholders. Dr Vertigan's examination recommended that steps be taken to strengthen the bargaining power of shippers by:

- requiring service providers to publish the information that prospective users need to make an informed decision about whether to seek access to a pipeline service and to assess the reasonableness of an offer made by the service provider; and
- introducing a binding commercially oriented arbitration mechanism into the National Gas Law (NGL) that would be available to parties as a backstop if commercial agreement cannot be reached.

Changes to the NGL now require the arbitrator must make their decision using an asset valuation approach that takes into account the construction cost of the pipeline, and additions (capex) and the return of capital recovered (Rule 569).

The AER was tasked with producing financial reporting guidelines to assist access seekers with information. This guideline includes two approaches to asset valuation, reflecting different approaches to the "return of capital recovered": book value and the recovered capital method (RCM).

The **book value** calculates depreciated book value plus or minus any additions or disposals. The guideline requires assets to be depreciated using methods prescribed under the accounting standards. The book value approach allows acquisition costs to be used as the base for determining the opening balance.

The **RCM value** calculates the depreciated cost of constructing the pipeline, with the depreciation component reflecting the return of capital generated since the pipeline was constructed (i.e. revenue less operating expenditure less the return on capital less net tax liabilities). It is intended to provide service providers and prospective users with greater understanding of the residual value of the asset by showing the capital that has been recovered from users since the pipeline was constructed.

While the AER recognised difficulties with information using the recovered capital method, it stated that:

> "The RCM asset value provides prospective users with an indication of the cost of service provision to the service provider, which they can use to assess the reasonableness of the price of the services offered. Further, the publication of this information is expected to impose greater discipline on service providers when setting prices, as it assists market participants and policy makers assess whether standing offers are consistent with what would prevail in a workably competitive market."

Source: Gas Market Reform Group (http://gmrg.coagenergycouncil.gov.au/), AER, National Gas Rules

3 RECOMMENDATION 1B: TRANSITIONAL PROVISIONS

3.1 The objective of proposed transitional arrangements

The Draft decision paper explains the need for transitional arrangements as follows:

> The proposed move from GRV to a DORC methodology may affect the expected revenue earning opportunity of existing infrastructure owners, who invested on the basis of the existing regulatory framework. This is because for some routes, the starting asset value under a DORC approach may be lower than under a GRV approach, which would result in a lower ceiling. However, this will be partially offset through recognition of actual operating and maintenance costs, which will push up both the floor and ceiling, again particularly so for assets that are not in a new condition or well maintained.[16]

Our view is that transitional arrangements should be provided if, and only if, they are required to enable investors to recover capital expenditure incurred. That is, transitional arrangements may be justified if they allow investors to recover capital expenditure incurred under reasonable expectations that the GRV methodology would continue. This expenditure should include expenditure incurred by railway owners in securing the licence to operate its Infrastructure Freight Network. This would be consistent both with the fairness criterion proposed in the Draft decision paper and economic efficiency, as investors should not be denied the opportunity recover efficient expenditure because of changes in Government policy.

However, it would be quite inappropriate for any transitional arrangement to safeguard all revenue which investors had come to expect under the GRV methodology. As the Draft Paper states, one of the key reasons to move to a DORC methodology is that the GRV methodology 'does not prevent prices from exceeding the efficient cost of providing access to the infrastructure (including a competitive return on investment).[17] To the extent that the GRV methodology results in prices higher than the DORC methodology, GRV would have enabled prices in the past to exceed the efficient cost of providing access to infrastructure and would (if it continued) enable prices in the future to exceed the efficient cost of providing access to infrastructure. It would be inefficient and unfair to access seekers for any transitional arrangements to safeguard returns that were higher than those needed to recover expenditure that investors had incurred in the past.

For completeness, we note that expenditure incurred in the past should not include expenditure by third parties on the network. For example, we understand there has been significant State and Federal government investment in grain lines following the 2009 Grain Network Review[18], and expenditure already recovered from access seekers under specific access arrangements.

Whether any transitional arrangements are required to enable investors to recover capital expenditure incurred will depend on the initial fixed asset valuation, the ages of the relevant assets and the extent

[16] Draft decision paper, p 18.

[17] Draft decision paper, p 7.

[18] As described in Chapter 3 of Economics and Industry Standing Committee, *The Management of Western Australia's Freight Rail Network*, 2014.

to which initial capital expenditure has already been recovered. In our opinion, the ERA should first determine the initial fixed asset valuation and then calculate whether transitional arrangements are required to enable investors to recover their capital expenditure. Without knowledge of the above data, it is impossible to tell whether transitional arrangements are needed or the length of time over which it would be appropriate for them to persist.

3.2 The proposed transitional arrangements

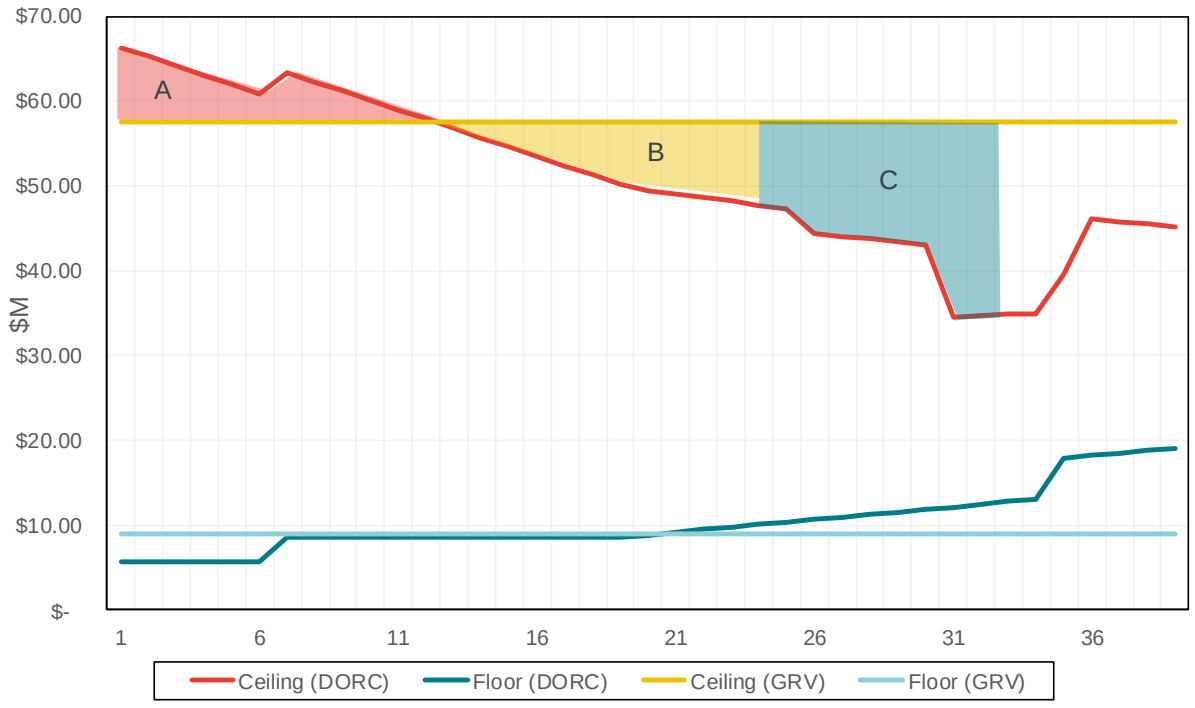
Figure 2 of the Draft decision paper shows the relationship between floor and ceiling profile using GRV and DORC with straight line depreciation (standard DORC) based on certain assumptions. Two key assumptions appear to be:

- there is no revaluation of assets once they have been acquired
- there is little investment in the assets until year 35.

Figure 2 suggests that asset owners that face a switch in methodology in the region "B" will potentially lose because they will switch from the yellow line to the red line; and they missed out on "A" and did not get a chance to receive full compensation for this loss by gaining "B".

However, for assets older than 11 years, the ceiling under GRV will be higher than the ceiling under standard DORC. This suggests the use of GRV will have allowed higher recovery compared with standard DORC for assets older than 11 years. If we assume that the average age of assets acquired by an access provider was older than 11 years at the time of the acquisition, it would follow that the use of GRV would have allowed over-recovery (compared with standard DORC) in the period since the acquisition, and if assets were older still, access providers would have been recovering larger amounts, i.e. including "C".

Figure 3: Replication of Figure 2 from the Draft decision



Source: Frontier Economics

The diagram also abstracts from the issue discussed in the previous section – that increases in GRV over time have allowed gains relative to any methodology that would have locked in the value of assets (including DORC) at year 1. That is, if current asset owners acquired assets older than 11 years, it is likely that their use of GRV has allowed them to over-recover during the period of their ownership. This over-recovery would have been made worse by any revaluations allowed during the period of their ownership.

The Draft decision paper states that the Department has considered whether exceptional loss could be incurred by access providers as a result of the move from GRV to standard DORC. Although it states that exceptional losses are not expected, it considers that losses that do occur should be addressed by adjusting the timing of cash flows for depreciation and return on assets in certain circumstances.[19]

The proposal in the Draft decision paper is to allow the use of an annuity depreciation profile for a maximum of five years beyond the move to DORC. While the recommendation "allows" for the use of such a profile, it is apparent that such a proposal will be quite difficult to implement in practice.

For example, Treasury envisages that access providers might provide evidence that the conventional DORC ceiling price would be below the prices that access seekers are willing to pay for the relevant railway. Quite how the access provider would know the price that access seekers are willing to pay is unclear, and we question whether this is workable.

3.2.1 Is there any "loss" under asset base indexation?

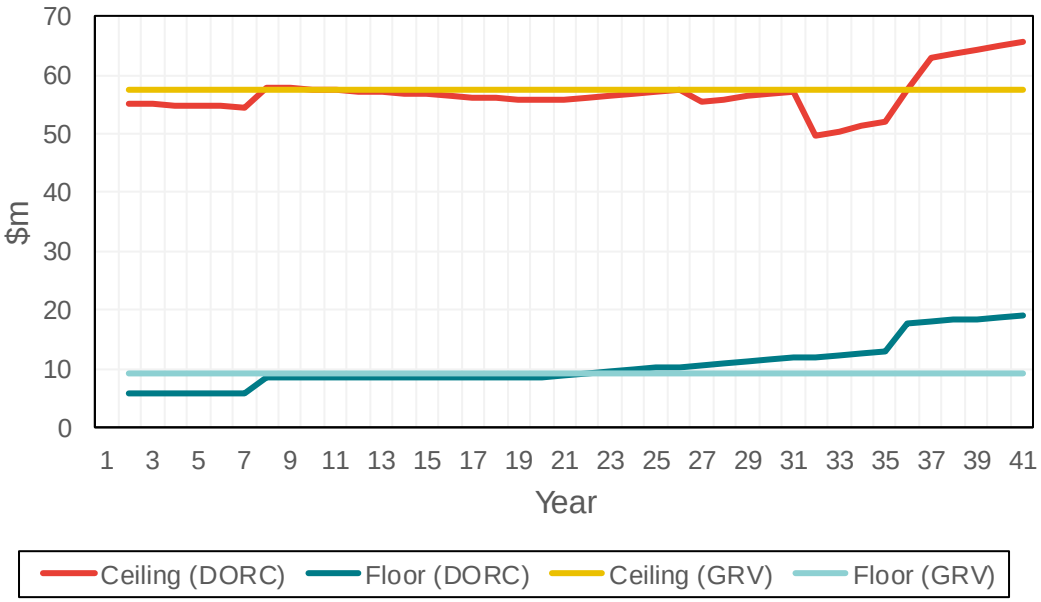
The examples used by Treasury seem to have in mind that a ceiling derived from DORC using straight line depreciation would be higher than GRV in the early years.

We note that this relationship only holds if the benchmark DORC valuation does not include any indexation of the asset base. Related to the point we make in section 2.1.1, it is not entirely clear whether Treasury is proposing that the DORC valuation be indexed in the RAB roll forward. However, it is well known that the effect of indexation of the asset base and the removal of this benefit from the annual revenue requirement is to defer the recovery of depreciation. In that case, it is much less clear than DORC would lead to under-recovery compared to GRV.

In fact, when we apply a 2.5% indexation approach to the RAB using the same assumption as in the Synergies example (Figure 2), the ceiling price for DORC in early years is trivially different from that under the GRV approach. One could only form the view that DORC would lead to "under recovery" if one had a specific interpretation of that approach in mind. In our opinion, this reinforces the need to focus on actual cost recovery rather than hypothetical DORC / GRV comparisons.

[19] Draft decision paper, p 18.

Figure 4: Replication of Figure 2 from Draft decision – applying indexation of DORC at 2.5%



Source: Frontier Economics calculations

3.3 Conclusion on transitional arrangements

Transitional arrangements should be provided if, and only if, they are required to enable investors to recover capital expenditure incurred.

As a screening step, we suggest that Treasury determine a threshold for the average age of the assets; if relatively low (the assets are new) transitional arrangements of the kind described by Treasury are much more likely to be fair and efficient; however, if the assets are older transitional arrangements would be unnecessary.

The ERA should then determine the initial fixed asset valuation and then calculate whether and what kind of transitional arrangements are required to enable investors to recover their capital expenditure. It is important that this determination process is transparent and open to all parties.

4 RECOMMENDATIONS 2 AND 3: PRICING PRINCIPLES

4.1 Indicative tariffs and standing offers

Treasury notes that there is only very limited guidance provided in the Code about how a price between the floor and ceiling should be selected. We agree that this has hindered the negotiation process in the past – this has also been accentuated by the very large difference between floor and ceiling prices.

Treasury considers the use of indicative tariffs – a standard price for access that is approved by the regulator for a particular freight task. Indicative tariffs would do much to reduce transactions costs, and are a feature of most other rail regulatory regimes in Australia.

Treasury does not consider, however, that the net benefits from indicative tariffs would be as large as those from standing offers. A standing offer does not require regulatory approval.

Draft recommendation 2 is to require railway owners to publish a standing offer for defined rail tasks when required by the ERA. The Draft decision paper states:

> *The ERA would be required to determine when a standing offer is required, using the criteria that they apply in any situation where there are one or more actual or potential operators on a route with similar freight tasks, with similarity in freight tasks assessed in relation to train length, axle load and freight type.*[20]

The criterion of similarity in freight tasks suggests that the criterion should refer to two or more actual or potential competitors rather than one or more. This interpretation is supported by the Draft decision paper's statement that standing offers in electricity markets provide a signal to customers about what a reasonable price to pay might be. It is also supported by the example given in the Draft decision paper:

> *For example, the Department has received feedback from some stakeholders that intermodal traffic on the interstate route is sufficiently similar to justify an indicative tariff or standing offer, and notes that in its 2015 review of the Code, the ERA acknowledged that*

[20] Draft decision paper, p 28.

> *there may be a net benefit to indicative tariffs for interstate services west of Kalgoorlie (paragraph 92).*[21]

As a consequence, the draft recommendation concerning standing offers seems to be of little relevance to the routes used and services provided by CBH.

In our opinion, there would be material benefits from a standing offer that provided:

1. the methodology used to calculate the standing price; and
2. sufficient information to enable prospective users to understand how the standing price reflects the application of the methodology.

These benefits apply regardless of how many users or the types of freight carried. The reason is that access seekers need to have some understanding of whether the price offered by the access provider is methodologically flawed, or based on a false assessment of market inputs. Unless the access seeker receives this information, there is increased potential for misunderstanding and seeking of arbitration. For example, if the access provider has prepared its standing offer on the basis of the competitive imputation principle (as described below), it would be useful to communicate this so that the access seeker can form their own assessment of the veracity of the proposal.

We note that what we propose as an alternative is identical to the information that must be provided by operators of non-scheme gas transmission pipelines under the National Gas Rules (**Figure 5**).

[21] Draft decision paper, p 27.

Figure 5: National Gas Rules and standing terms

554 Standing terms

(1) The service provider for a non-scheme pipeline must publish:

(a) standing terms for each pipeline service on the pipeline in accordance with subrule (2); and

(b) the methodology used to calculate the standing price referred to in subrule (2)(b) and sufficient information to enable prospective users to understand how the standing price reflects the application of the methodology.

(2) The standing terms must in each case include:

(a) the service provider's standard terms and conditions applicable to the pipeline service;

(b) the standing price, being the price applicable to the pipeline service under the terms and conditions referred to in paragraph (a); and

(c) other information about prices and charges applicable to the pipeline service including the charging structure for the pipeline service, any minimum charge and any additional charges such as imbalance or overrun charges.

Source: NGL, Part 23

We further note that ARTC has recently proposed to publish standing offers for interstate access, in addition to indicative tariffs which cover floor and ceiling charges.[22] The ACCC noted that the standing offer was non-binding and had no formal role under the proposed 2018 access undertaking, but that it was released to allay concerns regarding the large gap between the proposed floor and ceiling under the 2018 undertaking and the wide range of potential charges that flow from this gap.

4.2 Competitive imputation pricing

Draft recommendation 3 is to introduce a competitive imputation pricing principle as a part of the pricing principles set out in Clause 13, Schedule 4 of the Code. This would require parties to consider the following principle when negotiating access prices:

> *Where there is a competitive alternative, an access price should be negotiated with regard to the price of another mode of transport (or combination of) for transporting similar freight,*

[22] https://www.artc.com.au/uploads/2018-IAU-Standing-Offer.pdf

adjusted for service quality differences between rail and the competitive alternative and reduced by the efficient above rail cost of providing the relevant freight service.[23]

The Draft decision paper indicates that this principle is a guide to the process of negotiating and that the introduction of this principle could assist in determining an appropriate price between the floor and ceiling. The indication that the principle is intended to assist in placing the price between the floor and ceiling of Draft Recommendation 1a is reinforced by the proposition in the Draft decision paper that competitive alternatives are already likely to be considered by parties in a negotiation'.[24]

If the principle is to be maintained, we suggest that this be made clearer by a redrafting of the principle to state that the access price being negotiated is being negotiated in accordance with Draft Recommendation 1a.

With that noted, we have reservations about this recommendation and do not consider it should be adopted. This is for two reasons:

- it seems to create undesirable incentives
- the competitive bypass price should form part of the proper construction of an initial DORC ceiling valuation.

At face value, it is reasonable that bypass prices would be taken into account by the access provider in setting charges; both parties have an interest in using rail where this is the most efficient means of transport. However, the nature of the bypass comparison creates a problem as it discourages pursuit of above-rail efficiencies. To take a simple example, suppose the below rail ceiling price was $10, and the calculated bypass pass was $15. If the above-rail cost was $6, this would suggest the below-rail charge should be no higher than $9. Now suppose the above rail-cost is reduced to $5 through efficiency improvements. Then the below rail price would be allowed to increase to $10 to remain consistent with the $15 bypass price – which undermines the incentives for above-rail operators to become more efficient.

Optimised replacement cost valuations use modern equivalent assets (MEAs) to provide access services, as noted in the Draft decision paper (p. 8). However, it should be noted that in principle there is no reason to limit the MEAs to *rail* assets; MEAs are used so that access seekers do not inefficiently bypass the infrastructure so that assets needed are those that provide equivalent functionality and output to the asset being value. The argument for DORC is variously described as the market price of the assets in a hypothetical second hand market, or as a value that would avoid bypass of the assets. It should be obvious in these cases that the DORC value *must already be reduced to reflect available bypass options*.[25]

In regulatory settings, this issue has received most attention in telecommunications. For example, in telecommunications, broadband is still mostly supplied over copper lines. However, regulators around the world[26] when conducting forward looking cost modelling exercises estimate the efficient cost of supplying a broadband service not by estimating the value of replacing copper loops, but by considering

[23] Draft decision paper, p 29.

[24] Draft decision paper, p 29.

[25] See also the discussion from paragraph 200 on, in *Application by Telstra Corporation Limited* ABN 33 051 775 556 [2010] ACompT 1 (10 May 2010).

[26] Note that Australia no longer uses such models, as it has moved to a "locked in and rolled forward" asset base for both fibre networks (NBN Co) and copper networks (Telstra).

the most efficient method which could include a copper local loop, a fibre local loop, or a wireless local loop.

In principle, we should therefore expect that access providers would provide DORC valuations that, where appropriate, use the cost of bypass from other services to determine a ceiling asset valuation; in other words, if the rail-based DORC valuation leads to a ceiling that is above the road ceiling, then the ceiling should be reduced to the correct DORC valuation. Prices should be negotiated between that ceiling and the floor – so that the road bypass price should not necessarily be the negotiated price.

4.3 Conclusions on pricing principles

Indicative tariffs would do much to reduce transactions costs, although it is clear they would involve higher upfront costs on the ERA and access providers. If standing offers are to be preferred, they should apply uniformly to all providers, be based on a clearly expressed methodology and with a transparent application of that methodology. Competitive imputation pricing is not likely to add much value to the regime, as it (a) seems to disincentivise above rail efficiencies and (b) should already correctly form part of DORC valuations that are used as the ceiling price in negotiations.

frontier economics

BRISBANE | MELBOURNE | SINGAPORE | SYDNEY

Frontier Economics Pty Ltd
395 Collins Street Melbourne Victoria 3000

Tel: +61 (0)3 9620 4488
www.frontier-economics.com.au

ACN: 087 553 124 ABN: 13 087 553