



Assistant Director, Rail  
Economic Regulatory Authority of Western Australia  
Level 4, Albert Facey House,  
469 Wellington Street  
Perth WA 6000

[publicsubmissions@era.wa.gov.au](mailto:publicsubmissions@era.wa.gov.au)

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Aurizon welcomes the further opportunity to comment on the Economic Regulatory Authority's (**the Authority's**) third review of the Railways (Access) Code 2000 (**the Code**).

This submission responds to the Authority's request for additional comments on matters raised in stakeholder submissions. In particular, views are sought on issues relating to prescriptiveness of the access regime and asset valuation methodologies. Aurizon has sought to restrict further comment to these aspects.

### **Prescriptiveness of the Rail Access Regime**

Aurizon has previously submitted that the Western Australian Rail Access Regime (**WARAR**) is a template model for promoting commercially negotiated outcomes for rail access and reflects the legislative intent of establishing a negotiate-arbitrate model.

The concept of prescriptiveness may appear counter intuitive to the intent of negotiate-arbitrate model where aspects of the commercial negotiation are determined upfront by the independent regulator. Alternatively, prescription could be interpreted as including a greater degree of structure regarding the provision of information, obligations on parties to the negotiations and increased oversight of the conduct of negotiation. Aurizon prefers the latter interpretation as being consistent with promoting an effective negotiation.

Aurizon's submission also noted that the Authority should refrain from engaging in regulatory creep, which can manifest in a number of ways, including: (a) the regulator exercising its reasonably broad discretion to extend its decisions beyond the realm of competition policy, into industry policy; and (b) unnecessary prescription and detail, which can limit the ability of participants to flexibly respond to the needs of the market.

For all intents and purposes, Aurizon is unable to participate in the market for rail haulage for grain in Western Australia. There is no obligation for the owner of the grain handling terminals to provide rail receival facilities for growers who wish to use an alternate rail service provider and it is commercially impractical to accumulate sufficient grower volumes to procure marketing services. As the owner of these facilities also provides haulage services as a not for profit cooperative it is also not commercially feasible for a corporatized entity to compete on these terms.



As the only aspect of the transportation of grain by rail from the silo to ship unloader which is not provided by the cooperative entity is the below rail service then it is reasonable to assume that negotiation between one monopolist and another should involve the exercise of countervailing market power and the role of regulation should be limited. The example serves to distinguish between promoting competition in the rail haulage market and the issue of fairness in below rail pricing. While the latter is important, it also requires a more stringent test of how competition in a relevant market would be improved through regulatory intervention.

Importantly, the prospect of the objectives of an access regime being realised are highly dependent on the incentives for an access provider to provide access. Vertical integration within supply chains primarily occurs due to the difficulty in writing a complete contract. The consequence of being unable to write a complete contract is significant coordination failure, disruption and loss of operational efficiency. An inevitable consequence of this inability to write a complete contract, and the need for the service provider to appropriately protect its legitimate interests, is that without an incentive to provide access it is unlikely that the regulatory design will overcome this misalignment of incentives. This is largely evident in the fact that rail infrastructure which comprises a component of large iron ore producers' production process remains unused by third parties. This is not a failure of WARAR but a recognition that WARAR is unlikely to be the appropriate instrument to achieve the objective of efficient multi-user supply chains.

The preference is therefore that the focus of WARAR should be limited to its original legislative intent of promoting competition in the rail haulage market albeit with improvements in its operation by largely addressing information asymmetry to increase countervailing market power and facilitate effective negotiations. Expanding the scope of the regime to address matters beyond competition in the rail haulage market requires a more detailed consideration and review of the WARAR objectives itself.

It is also noteworthy, that the WARAR was originally designed in an environment of vertical integration of brownfield rail infrastructure. It was accepted, and empirically valid, that issues of service quality were not of significant relevance as the vertical integrated service provider has appropriate incentives to minimise the total cost function of its own operations. The obligation to provide services on a non-discriminatory basis also ensured that rail infrastructure was maintained to an appropriate service quality for all users. Accordingly, there is considerable merit in the access regime increasing the reporting obligations to provide greater transparency as to what represents the minimal contractual service quality obligation under the infrastructure lease.

### **Pricing Guidelines May Assist Access Negotiations**

Aurizon's submission suggested that the Code could be amended to expand the role of the Authority to develop non-binding pricing guidelines which would include matters which the arbitrator should have regard in resolving a dispute on access prices.

It is widely acknowledged that floor and ceiling prices provide limited guidance as to an efficient price within those boundaries. As rail operators are required to renew and replace capital within a competitive market, below rail access pricing can have significant adverse impacts on competition in the rail haulage market if rail haulage prices are squeezed below full economic cost.



Importantly, the issue of pricing is more closely related to that of economic hold-up. In most circumstances where the developer of a project seeks rail access it will negotiate appropriate terms for the expected life of the asset. The prospect of economic hold-up does not arise as the process for review of pricing is determined up-front and deemed appropriate to the economics of the project. Therefore, opportunistic access pricing can predominantly occur in the renegotiation of prices where a substitute service is not feasible in the presence of sunk costs.

While the costs and risks of providing the service are relevant to determination of an access charge the allocation of common and sunk costs above marginal or incremental cost requires consideration of a broader range of factors. These might include one or more of the following in combination, but not limited to:

**1. Next best alternative**

In the absence of sunk investments which preclude the use of a substitute, does a feasible substitute for the rail transportation service exist? It is reasonable to expect that prices should not exceed the price of a substitute service. Aurizon considers the Competitive Imputation Pricing Rule under the Australasian Rail Access Code, or a variant of the Efficient Component Pricing Rule, has potential application to guide an efficient pricing outcome.

**2. Are there incentives for efficiency and barriers to entry**

Do below rail access prices provide appropriate incentives for rail operators to pursue innovation and productivity or do those prices lock the industry into the continued utilization of sunk legacy assets and declining productivity? Is increased below rail profitability commensurate and correlated to overall improvements in industry productivity?

**3. Competition in Upstream and Downstream Markets and Hierarchy of Replacement Costs.**

A substantial proportion of rail infrastructure has long physical asset lives which may have been acquired as part of a transaction or installed to achieve different public interest objectives at the time of installation. It may also be case that those assets will not require physical renewal or replacement.

In order to promote competition in the rail haulage market then prices within that market will need to reflect the efficient and economic cost of entry. It may therefore be necessary to consider the application of a hierarchy of costs which would have regard to the objects of the regime and forward looking avoidable below rail costs.

**4. Congestion and Opportunity Costs**

Where the rail infrastructure is congested it may also be necessary for an efficient below rail price to reflect the lower of:

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- The incremental costs of alleviating that constraint (in order to provide efficient price signals of the costs of expanding the facility); or
  - The highest contributing access charge within the corridor where the prospect of the expansion proceeding is not economically feasible (and to ensure the service provider does not forgo revenue from not being able to provide services to higher paying traffic).

## **5. Past Prices and Material Changes in Circumstances**

It is reasonable to assume that the appropriate benchmark price for access is the resultant price from a previous negotiated outcome. Presuming the negotiation reflected all available information and that bargaining produced an efficient price relevant to market conditions then it may be anticipated that the renegotiation of that price will reflect only changes in cost or risk, or material change in market conditions.

## **6. Promoting efficiency in the rail haulage market**

Clause 6.2.f(2)(4) of the Competition Principles Agreement (CPA) notes that the state access regime should incorporate the principle that regulated access prices should be set so as to provide incentives to reduce costs or otherwise improve productivity. Where a service provider is currently earning revenue below its revenue ceiling levels it may have strong incentives to fully capture the value of efficiency incentives in the rail haulage market. This arises because the rail operator would need to negotiate the ability to reduce path requirements upfront and disclose its potential innovations and productivity gains. Alternatively, at the time of entering a new agreement the rail operator might seek a reduced number of paths for the same traffic task. Again the service provider might seek to increase access charges to capture the value of these above rail efficiency improvements.

Aurizon considers the transfer of these efficiency gains to the service provider removes the incentives for rail operators to innovate and pursue productivity gains and is inconsistent with the principles of the CPA. Accordingly, Aurizon also considers that the arbitrator should also have regard to the need to provide incentives for reducing costs and improving productivity associated with the use of the regulated service

## **7. Reference to Industry Economics, Competitive and Peer Prices**

Below rail services are an input price to a supply chain. Efficient below rail prices should generally be representative of the broader industry economics it supports and the relative proportion of costs and risks within that supply chain. It may not necessarily be appropriate to reduce below rail prices as the only regulated part of the supply chain if it is carrying greater risk than other components of the chain.

Nevertheless, references to competitiveness of the supply chain relative to competing supply chains should be supported by appropriate evidence of the supply chain costs relative to those competitors. For example, the competitiveness of intermodal freight operations relative to road would require consideration of changes in the pricing of modal substitutes (and reflected in heavy vehicle pricing).

Alternatively, benchmark prices may also yield relevant information which an arbitrator may have regard. However, the importance of understanding the competitive cost equivalence of the supply chain is demonstrated by the significant disparity between rates and total costs. The following table shows the average rail cost and the average rail rate for two regulated rail providers of grain transport in Canada<sup>1</sup>.

Table 1. Western Grain Revenue Cap for 2013-14 Crop Year

Revenue (\$ 000s)	Average Haul (miles)	Tonnes (000's)	Net Tonne Km (million)	Rail Cost \$/net tonne	Rail Rate \$/ntk
672,111	1,017	19,209	31,648	34.99	0.021
623,620	873	19,252	27,227	32.39	0.023

The example shows a significant disparity between the rate (which reflects a high productivity multi-product railway with scale efficiencies) and the rail cost (which reflects the rail haulage distances). The arbitrator would need to consider the relative differences to the benchmark or peer railways and consider the appropriate metric.

Aurizon recognises the factors relevant to an efficient price which promotes competition in an upstream or downstream market can be diverse and that it is neither practical nor desirable to prescribe what factors should apply and what weight each should be given. Nevertheless the consideration of the above issues, and any other relevant factors, could provide a much narrower range for a negotiated outcome than presently provided by the floor and ceiling revenue determination.

Aurizon also notes the determination of rate cases involving grain has been a matter of recent debate in the United States with the Surface Transportation Board (**STB**) noting that it has not received a single rate case complaint from a grain shipper since 1981. In part, this is associated with the application of the Stand Alone Cost (**SAC**) constraint. The STB is currently reviewing whether changes need to be made to make the rate complaint process for accessible for growers and has commissioned a study to examine alternates to the SAC<sup>2</sup>. The findings from this review may have some application to the development of any future pricing guidelines.

### Application of the Gross Replacement Valuation (GRV) Methodology

The WARAR is the only rail access regime which employs the GRV methodology. Aurizon considers that the issue of consistency, whilst desirable, is subordinate to whether any change in that methodology gives rise to unintended consequences or adversely affects the rights of parties within an interest in the declared services, as either a user, or as a provider of the service.

In practice, asset valuations have little bearing on the vast majority of negotiated price outcomes in Australia where the stand alone cost or ceiling price from that valuation sits substantially above the capacity to pay or any relevant substitute.

<sup>1</sup> <https://www.otc-cta.gc.ca/eng/western-grain-maximum-revenue-entitlement-program>

<sup>2</sup> Surface Transportation Board (2015) Rail Transportation of Grain, Rate Regulation Review, Docket No. EP 665 (Sub-No. 1)



The objectives behind the application of GRV are reasonably sound in the context of the brownfield railway to which it initially applied. There was a general expectation that demand for the service extends beyond the physical asset lives and that the ceiling price would better reflect the conditions which might be expected to prevail in competitive markets with the threat of entry (i.e. cost of entry are reduced or reflect a different technology). This should be supported by an appropriate return on capital which adequately reflects those risks.

However, as noted in Aurizon's initial submission, GRV should be reflective of the service quality that is being provided. That is the value of the asset value should be adjusted to more broadly reflect the service which is being provided. If two rail corridors produce comparable GRV levels yet provide two materially different levels of service quality in terms of reliability, performance and availability, then this should be an indication that there is a flaw in the GRV assumptions. To the extent GRV is retained then there is a need to identify how service quality differentials are reflected in the GRV estimate.

#### GRV is not suited to greenfield multi-user infrastructure

In contrast, the application of GRV to greenfield resource export infrastructure is not commercially desirable and does not provide appropriate incentives to invest. This occurs mainly due to:

- the GRV approach significantly back-loading the asset recovery making it unattractive to project financing and distorts financial metrics which reflect accounting depreciation;
- the economic life assumptions being subject to regulatory risk of material error with respect to resource project life with little capacity to address that error in response to changes in relative competitiveness of producers over time;
- exposing the project proponent to market risks associated with changes in rail construction costs over time which is inconsistent with the normal approach to long life, high fixed cost infrastructure investment; and
- not adequately reflecting the development risks assumed by the proponent which are not reflected GRV valuations or cost of capital. Project financing risks will typically be reflected in the financial model and pricing over a substantial period of the asset life. This is the primary rational for the granting of access holidays as reflected in the National Gas Rules.

The inherent flaws in the application of GRV to rail infrastructure which has been built for the primary purpose of supporting the producer's own demand may not be fundamentally fatal to the producer's incentives to invest. Where it can be expected that the owner is the predominant user then the consequences of regulatory error in the application of GRV assumptions may not have a material bearing on the financial outcomes.



In addition, if access occurs substantially after the construction date then the variance between Depreciated Actual Costs and GRV is also diminished. However, where the infrastructure has been provided for the purpose of multi-user access<sup>3</sup> then the consequences of GRV are applied to the total revenue and demand base and represents an unacceptably high level of commercial and regulatory risk.

DORC is highly complex and may not yield substantial differences to GRV

The apparent expectation from submissions is that DORC would yield lower asset valuations than the current GRV methodology. The predominant concern with GRV is that it can yield a revenue ceiling which is disproportionate to the condition of, and service quality being provided by, those assets.

The GRV approach avoids the complexity and subjectivity of assessing the depreciated component of DORC. Typically, the absence of robust information regarding installation dates and historical capex requires considered judgements to be made as to the opening asset value and depreciated life of older assets. It also requires detailed consideration of whether a straight line or economic depreciation profile should be applied.

Importantly the application of DORC, relative to GRV, could lead to disparity in pricing for similar services where some corridors have been subject to asset renewals investment and others have not. This could lead to price increases for some users and price declines for others.

It can also be expected that where the DORC value is substantially below the GRV threshold then the assets may require replacement or renewal in the short to medium term to maintain the lease obligation. However, migrating to an alternate valuation methodology has the potential to provide the service provider a wind-fall gain where it has recovered revenue on the basis of an annuity which reflected future capex costs and then fully recovers that capex through its inclusion in a regulatory asset value.

An additional key difference between GRV and DORC (or lock-in RAB value) is that there is no explicit regulatory compact in relation to optimization risks. That is, the assets were acquired on the basis that demand risks are assumed by the service provider as opposed to fully transferring that risks to remaining users through higher access prices (to maintain financial capital maintenance).

Aurizon's submission suggested that any change in the asset valuation methodology in the Code requires a detailed investigation of its impacts. In particular, the analysis should evaluate how the rights or interests of various parties would be impacted by that change as discussed above. Aurizon reiterates its suggestion that any changes to the regime should be subject to a robust economic analysis.

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<sup>3</sup> **Multi-user Access** is defined as the efficient provision of rail transport services by a single vertical integrated rail operator for the benefit of multiple producers.



## Addressing comments in the Frontier Economics Report

Frontier Economics argue that GRV is a flawed method as applied in the Code as:

‘The GRV method allows returns that are not consistent with the 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 means that the expected NPV of Brookfield’s existing investments is greater than zero.’

Frontier state that this is inconsistent with the Competition Principles Agreement and that GRV should not be subject to changes over time. Aurizon considers there are problems with this line of argument:

- First, GRV as applied in the Code should operate symmetrically and be an unbiased estimate such that the changes in value are just as likely to go down as they are to go up. The exception being newly built resource corridors which may be subject a positive or negative bias. To the extent those changes in costs were predictable then this would also have been reflected the purchase price;
- Second, the CPA requires that prices generate at least enough revenue and therefore does not preclude the windfall gains, or windfall losses associated with the use of GRV. The CPA does not ‘cap’ the revenue the service provider is able to earn provided prices are efficient; and
- Third, GRV excludes major periodic maintenance and by locking in a value of GRV under the code it exposes the service provider to a misalignment between the value of its assets and the costs of renewals.

An increase in the value of GRV does not necessarily lead to a conclusion that the service provider has obtained a windfall gain. It is also feasible that the risks associated with the unbiased movements of GRV were factored into the acquisition price.

Aurizon also notes that issues of whether prices could, or would, lead to inefficient duplication of the service provide little practical utility to the regulatory objectives. Of particular importance is whether GRV, or an alternate, promotes efficient investment in the regulated facility.

Aurizon also recognises the benefits of adopting a line-in-the sand approach but considers there are significant and substantial regulatory risks associated with making fundamental changes to the regulatory framework after a party has acquired a financial interest in those assets.

In this regard, the most relevant valuation would be that which reflected the expectations of the service provider when they acquired the rights to provide the service. However, the transaction price itself may not be an appropriate benchmark for this purpose as it will also incorporate the value of future costs that were expected to be incurred and not simply the costs which prevailed at the time of the transaction.



T 13 23 32  
F +61 3019 8082  
E John.Short@aurizon.com.au  
W aurizon.com.au

Level 14, 175 Eagle St  
Brisbane, QLD 4000

GPO Box 456  
Brisbane, QLD, 4001



If the service provider were to propose adopting a line in the sand approach, then it would be incumbent upon that party to provide the Authority its valuation model for that purpose. While Brookfield refers to business valuation determinations in 2000 this value reflected the integrated service and the below rail assets were subject to a subsequent transaction. It is the latter transaction which should be relevant to the Authority's review.

Should the Authority wish to discuss any of the matters in this submission or seek our views on other matters please contact Dean Gannaway, Principal Regulatory Economist by phone on (07) 3019 2055 or via email at [dean.gannaway@aurizon.com.au](mailto:dean.gannaway@aurizon.com.au).

Yours sincerely

**[Original Signed]**

John Short  
Vice President, National Policy