AURIZON

Response to ESCOSA Draft Findings on Asset Valuation Methodologies for Periodic Revenue Reviews

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Executive summary

Aurizon welcomes the opportunity to respond to the Essential Service Commission of South Australia's (**ESCOSA**) draft report on the review of asset valuation methodologies for the periodic revenue reviews published on 21 August 2023 (**Draft Report**[1]).

Most importantly, Aurizon is pleased that ESCOSA has decided to continue to use the DORC methodology for Clause 50 periodic revenue reviews.

Notwithstanding this, Aurizon would like to take this opportunity to comment on several aspects of ESCOSA's analysis in reaching this decision:

1. Consistent with Aurizon's earlier response to ESCOSA's discussion paper on asset valuation methodologies for periodic revenue reviews dated 23 March 2023 (**March submission**), Aurizon maintains that the power to change the asset methodology for Clause 50 periodic reviews arises as part of the review of the operation of the Code, not at this time.[2] Aurizon also maintains that, even if it is incorrect on this point, the DORC methodology needs to be preserved for consistency of the provisions within the Code and regulatory consistency for the full period of certification to promote investment in the infrastructure.[3]
2. ESCOSA's proposal to provide a 'sensitivity analysis' is likely to create unnecessary contention between stakeholders and will not promote regulatory certainty.
3. While Aurizon does not necessarily agree that updating a DORC valuation would be a costly and lengthy as indicated by ESCOSA, it does agree that a full DORC revaluation is not required at this point in time or at the next review. A DORC revaluation may, however, be required if there is a material divergence between the change in likely network replacement costs from the change in general inflation or between physical and financial depreciation. In the meantime, there are other measures that ESCOSA could consider putting in place to preserve and maintain the veracity of the current model.
4. Aurizon would like to clarify its position in relation to the Recovered Capital Method (**RCM**) of asset valuation. The RCM valuation methodology is not a method of depreciation; it is an accepted method of asset valuation for greenfield projects with growing demand as it takes into account the costs incurred and revenues earned. The adopted straight-line depreciation in the calculation of DORC in an environment of growing demand exposes Aurizon to under-recovery of revenues, and there is no evidence that Aurizon will be compensated for demand risk by an elevated risk premium. RCM should be considered as a valid alternative asset valuation method, sensitivity analysis or otherwise.
5. Aurizon continues to advocate for the whole of line approach used by ESCOSA in all previous revenue reviews for reasons including consistency and certainty. Aurizon appreciates that ESCOSA is entitled to review cost allocation between customers and line segments and may wish to do so for internal sensitivity testing purposes. However, Aurizon is of the view that any review of cost allocation should be guided by appropriate economic principles and would note there were many limitations with the alternative method used in the last review of revenues.

Each of these points (excluding point 1) is dealt with in more detail, in turn, below.

1 ESCOSA, *Tarcoola to Darwin rail infrastructure: review of asset value methodologies for periodic revenue reviews: draft report,* August 2023.

2 These submissions are not repeated in this document. For more detail, see, in particular, Aurizon's March submission, p. 7.

3 These submissions are also not repeated in this document. For more detail, see, in particular, Aurizon's March submission, pp. 1-4 and 23-24.

1. Impact of ESCOSA’s proposed sensitivity analysis in periodic revenue reviews.

ESCOSA’s Draft Report states:

> *… a DORC asset valuation methodology will be applied for the purposes of the Clause 50 periodic review of revenues until there are compelling reasons to consider that a DORC asset valuation is no longer an appropriate methodology to determine efficient costs for the purposes of a Clause 50 review of revenues…. In addition, alongside the application of a DORC … the Commission intends to present sensitivity analysis for the benefit of stakeholders. That sensitivity analysis will show the results of the maximum revenue assessment had alternative valuation approaches been applied...*[4]

Aurizon can appreciate ESCOSA has proposed the sensitivity analysis in the interest of greater transparency. However, such a proposal would also seem to defeat the original purpose of ESCOSA’s review.

Aurizon understood that the purpose of the review was to evaluate particular asset valuation methodologies and conclude which methodology should apply for future periodic revenue reviews, and to identify in what circumstances an alternative methodology may be relevant. ESCOSA carried out that comprehensive review and decided to continue to use the DORC methodology. ESCOSA also expressly found that the Depreciated Historical Cost (**DHC**), Market Transaction Value, Economic Value and Deprival Value methodologies will not be applied for subsequent Clause 50 periodic reviews of revenues (other than if there compelling reasons to suggest the DORC method is no longer appropriate and other specific circumstances exist).[5]

By deciding to continue to use the DORC methodology, but also presenting a sensitivity analysis using asset valuation methodologies that ESCOSA decided would not be applied at this time, ESCOSA effectively undermines the certainty benefits that could have been obtained from this review.

Aurizon can appreciate that ESCOSA may want to run this sensitivity analysis for their own internal assessment to ensure nothing material has changed that would suggest a change in valuation method may be required but does not support its inclusion in the periodic revenue review reports.

Further, the decision places an undue regulatory burden on Aurizon by, in effect, subjecting Aurizon to multiple valuation methodologies and creating an ongoing cycle of review. Each of the potential alternatives used in the sensitivity analysis has its own weaknesses and idiosyncrasies – many of which are pointed out by ESCOSA in the Draft Report.

A final point that Aurizon wishes to make is that any consideration of alternative asset valuation methods – whether for use in a sensitivity analysis or otherwise – should also consider the RCM valuation method. This is discussed in coming sections.

2. DORC Revaluation Requirement

ESCOSA’s Draft Report states:

> *… there are not sufficient reasons to justify undertaking a full DORC revaluation at this time (i.e., a full DORC revaluation would involve a whole new assessment of a DORC*

4 Draft Report, p. 2.

5 Draft Report, pp. 15-17.

value including considerations of technology, optimisation and construction costs). Accordingly, the Commission will apply the original DORC value for subsequent Clause 50 periodic reviews of revenues (rolled forward with new assets added based on actual costs and the value of assets depreciated, and values adjusted with a measure of inflation, consistent with previous Clause 50 periodic reviews of revenues).

A revaluation is likely to be a resource-intensive, costly and lengthy process to undertake, and it can lead to disagreements among stakeholders… [6]

Aurizon does not necessarily agree that a full DORC revaluation would be as complex and costly as outlined by ESCOSA. In contrast to other previous state-owned rail networks the installation dates for the assets comprising the Tarcoola to Darwin Railway are a known input. This avoids the cost and complexity associated with estimating lives and accumulated depreciation on long lived assets. Consequently, a DORC *revaluation* is in Aurizon's opinion largely a desktop assessment and the Commission's concerns on cost and complexity may be overestimated.

Nonetheless, Aurizon agrees with ESCOSA that a DORC revaluation is not required at this point in time or at the next review. However, it may be required in the future.

On this point, Aurizon notes that, in its Draft Report, ESCOSA comments that the current rolled forward valuation has characteristics that make it somewhat similar to a measure of DHC. This is because the DORC value was calculated at the time of original construction costs of the Alice Springs to Darwin line [7]. ESCOSA further comments that the current rolled forward DORC valuation may be out of line with current market conditions and may not signal efficient access costs[8].

Aurizon agrees with these perspectives. Indeed, the current DORC valuation would not reflect the fact that replacement costs have risen faster than inflation and asset utilisation has been lower than suggested by regulatory depreciation expenses (and which have not been recovered by the railway's owners). While these issues may not justify the need for a full DORC revaluation to take place as this moment, they do suggest the current rolled forward asset valuation based on DORC from 2005 could be quite different from a contemporary DORC valuation and there could be room for improvement.

Aurizon considers that a revaluation of DORC would be appropriate where there has been either a material divergence between the change in likely network replacement costs from the change in general inflation (which would affect the estimate of ORC), or a material divergence between physical and financial depreciation (which would affect the deduction from ORC).

Until either of these scenarios exist, ESCOSA could (and likely is) consider other measures to preserve and maintain the veracity of the model for the immediate future, such as monitoring other indexes[9] that might be relevant to cost updating and which may be an indicator that a DORC revaluation is appropriate. ESCOSA may also consider continuing its analysis of the Australian Rail Track Corporation's (**ARTC's**) valuation and the important differences between the costs of different track sections and the drivers of differences in costs between sections to see what may apply here.

Aurizon welcomes the opportunity to comment on this in more detail at the next Clause 50 periodic review of revenue.

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6 Draft report, p. 13.

7 ESCOSA, *Tarcoola to Darwin rail infrastructure: review of asset value methodologies for periodic revenue reviews – discussion paper*, 7 November 2022 (**ESCOSA Discussion Paper**), p. 6.

8 ESCOSA Discussion Paper, p. 6.

9 Examples include Steel and Cement index, WPI, Road & Bridge Construction.

On this topic, there is one point that Aurizon would like to clarify from its earlier submission. In its Draft Report, ESCOSA states: "*[i]n its submission, Aurizon proposed adjusting the original DORC value with an alternative price index rather than using CPI inflation. However, whether the DORC value should be adjusted by either consumer prices or an industry-specific rate is an issue for subsequent Clause 50 periodic reviews of revenues*".[10] Aurizon does not propose an alternative price index as a means of rolling forward an existing DORC valuation but rather that it could be used as a "litmus test" for whether a new DORC valuation should be undertaken. If there is a material divergence between an index that measures an industry-specific rate of inflation versus consumer prices, then we can presume that a new DORC valuation may be very different from a rolled forward value.

3. Alternative asset valuation methodologies and demand pricing

ESCOSA states that:

> *Aurizon also expressed the view that the below-rail infrastructure is currently a greenfield project with potential for high demand growth and, accordingly, it proposed a recovered capital method for depreciation for subsequent Clause 50 periodic reviews of revenues (that is, regulatory depreciation to be calculated based on actual revenues and costs and any losses are to be capitalised in the asset base and rolled forward).*
>
> *Notwithstanding that this review is focussed only on asset valuation methodologies, Aurizon's proposal does not appear to recognise that demand-based pricing is already permitted under the Code, which allows pricing flexibility for the regulated operator, and the Aurizon proposal does not recognise that the treatment of demand risk for the greenfield nature of the project is already captured in both the risk premium applied to the return on assets and in the inclusion (or exclusion) of government-contributed assets and other government financial assistance in the DORC asset value.*[11]

Aurizon would like to take this opportunity to clarify the views expressed in its March submission. In Aurizon's March submission, Aurizon submitted that most methods of asset valuation, including a rolled forward DORC value, commonly rely on an arbitrary profile of regulatory depreciation. This is usually straight-line depreciation.[12] These valuation methods assume that the regulated operator has been able to recover this depreciation from users. This is a reasonable assumption for a utility with stable demand and strong market power.

However, for greenfield projects with growing demand, updated valuations using these methods can provide a false impression that revenues are excessive even when the project produces revenues that are less than efficient project costs. In such greenfield projects, where demand is initially low and grows over time, it may not be possible to recover the regulatory depreciation that is 'allowed for' in a depreciation valuation such as DORC or DHC in the early years of a project's life.

Aurizon is not proposing a recovered capital method "of depreciation". Rather, this is an asset valuation concept that is simply based around the concept of financial capital maintenance and the protection of investor's capital. RCM is the default valuation methodology that is used in arbitrations under section 113Z of the Australian National Gas Rules in 2017 involving gas pipelines and their users.[13] It calculates the depreciated cost of constructing assets, with the depreciation component reflecting the return of capital

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10 Draft report, p. 14.

11 Draft report, p. 15.

12 The indexing of the RAB makes this equivalent to straight line real depreciation.

13 energy-rules.aemc.gov.au/ngr/current/113Z

generated since the assets were constructed. [14] Rather than an assumed path of depreciation, depreciation is calculated with reference to revenues earned. By calculating depreciation in this way, investors in greenfield projects where there is a mismatch between demand and straight-lined depreciation, are provided with a fair opportunity to recover that cost from their investments.

Aurizon acknowledges ESCOSA's position that Aurizon has some pricing flexibility and that some demand risk for the greenfield nature of this project is accounted for in the risk premium applicable to project assets that is used in the excess revenues.[15] Nevertheless, that risk premium is effectively an Internal Rate of Return (**IRR**) concept and, where the depreciation schedule has not been set at a rate where the expected revenues over a review period would earn the minimum project return, then RCM is relevant to the consideration of whether revenues are excessive over a single review period.

In summary, Aurizon observes that:

- The issue of demand-based pricing is more a question of optimal pricing over time (the life of the access regime) rather than between customers.
- It is unclear whether the risk premium so calculated has any connection to the decision to apply straight line depreciation, as applying straight line depreciation could not be expected to achieve an escalated rate of return in periods of low demand. In other words, the escalated WACC may provide compensation that is very different from what is expected ex ante.
- RCM is a superior means of accounting for periods of low demand and low returns than other methods of asset valuation considered by ESCOSA (such as DHC and Market Value) and seems ideally suited for considering whether excess returns have been earned on project funds invested.

Aurizon recommends that any consideration of alternative asset valuation methods – whether for use in a sensitivity analysis or otherwise – should also consider the RCM valuation method.

4. Cost allocation principles

Although the consultation is notionally limited to asset valuation, ESCOSA has also provided some commentary on the issue of cost allocation between different segments of the rail infrastructure. In its Draft Report, ESCOSA states:

> *Given the limitations of the DORC valuation approach, the Commission has formed the view that during subsequent Clause 50 periodic reviews of revenues there is a role for close assessment of the cost allocation of avoidable and fixed costs between access holders (i.e., allocation between freight where no sustainable competitive price exists and all other access holders) and between each main segment of the Tarcoola to Darwin rail infrastructure. This will include reviewing approaches that have been applied in previous reviews to see if those cost allocations remain appropriate.*[16]

[14] The two equations of the standard building block model are: (1) regulatory depreciation = revenue – (operating expenditure + return on capital + tax allowance); and (2) recovered capital value = capital expenditure at construction + new capex – regulatory depreciation – disposals. Note that formula (1) can result in negative depreciation. If revenue is less than operating expenditure, return on capital and tax, then depreciation is negative and the RAB will appreciate, and effectively be rolled forward at the WACC. This path of revenues should not be surprising for an entrant using greenfields infrastructure with expectations of growing demand. This method can be applied to the total value of assets or just privately financed components.

[15] Aurizon understands that the rate that is used to determine whether the railway earns excess revenues is the ceiling rate, which is derived from a total project WACC as calculated in 2003 (8.1%). The project WACC of 8.1% is scaled up to reflect the possibility of regulatory truncation, as the distribution of expected returns highlighted that in many cases that project WACC could not be earned. The ceiling return when (i) scaled with an uplift factor to account for regulatory truncation and demand risk and (ii) applied only to project funds, is 17.7% (nominal) which is adjusted to real terms using risk free rates adjusted for the relevant period.

[16] Draft report, p. 12.

Aurizon continues to advocate for the whole of line approach used by ESCOSA in all previous revenue reviews for reasons including consistency and certainty. For the purpose of clarity, the most recent review report referenced this whole of line approach as "Option 1"[17], where the method was based on allocating costs across the entire rail line on the basis that the rail line is a contiguous network and costs are incurred as a whole network rather than in sections[18].

ESCOSA has indicated in their Draft Report that it is their intention to include the previously adopted alternative cost allocation methodology in the upcoming periodic revenue review, to again provide sensitivity analysis on the impact of cost allocation on the maximum allowable revenues. One Rail Australian North Pty Ltd (**ORAN**, now Aurizon) raised concerns at the time of publication with the alternative cost allocation methodology applied by ESCOSA and this position has not changed.

Aurizon can appreciate that ESCOSA may wish to apply alternative cost allocation approaches internally to test the accuracy of its review findings. However, if ESCOSA intends to apply an alternative approach in the upcoming review, ESCOSA should again consider some of the concerns and limitations raised by ORAN (now Aurizon) with the alternate approach in the last review of revenues, including:

- the approach reflects an assumption that mineral ore businesses transport on the shortest route[19]. We would argue this is not always the case and consideration needs to be given to the full supply chain;
- the approach excludes OZ Minerals volumes travelling from Wirrida to Tennant Creek;[20]
- lack of ability to utilise part of a path once a section of a path has been allocated. Capacity has been taken for the whole line;
- the approach is "likely to produce inconsistent results across review periods as mine mix changes"[21], and
- ensuring consistency in revenue and costs adjustments for line segments traversed by mineral traffic as conceded in the final report of the last review of revenues[22].

Additionally, Aurizon would encourage ESCOSA to ensure any alternatives take a principled approach that is consistent with economic efficiency principles, such as the approach outlined in section50(5)(d) of the Code.

Aurizon welcomes the opportunity to comment on this in more detail at the next Clause 50 periodic review of revenues.

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17 ESCOSA, Tarcoola to Darwin Railway: 5-year Review of Revenues 2013-14 to 2017-18 – final report, p.16

18 One Rail Australia (North), ESCOSA Tarcoola to Darwin Railway: 5-year Review of Revenues 2013-14 to 2017-18 – ORAN submission, p.9

19 One Rail Australia (North), ESCOSA Tarcoola to Darwin Railway: 5-year Review of Revenues 2013-14 to 2017-18 – ORAN submission, pp. 9

20 One Rail Australia (North), ESCOSA Tarcoola to Darwin Railway: 5-year Review of Revenues 2013-14 to 2017-18 – ORAN submission, pp. 9

21 One Rail Australia (North), ESCOSA Tarcoola to Darwin Railway: 5-year Review of Revenues 2013-14 to 2017-18 – ORAN submission, pp. 11

22 ESCOSA, Tarcoola to Darwin Railway: 5-year Review of Revenues 2013-14 to 2017-18 – final report, pp. 19-20