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By email: AERInquiry@aer.gov.au

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Dear Sebastian

Submission on the impact of capitalisation on the AER's benchmarking

Jemena Electricity Networks (Vic) Ltd (**JEN**) welcomes the opportunity to respond to the Australian Energy Regulator's (**AER**) consultation paper on the impact of capitalisation differences on benchmarking (**paper**). As part of JEN's 2021-26 price reset, we engaged with the AER staff to demonstrate the materiality of differences in capitalisation practices between Distribution Network Service Providers (**DNSP**) on benchmarking results. In its paper, the AER affirmed that based on its further review after Jemena's 2021-26 revenue determination (**final decision**), it considers there is sufficient evidence of materially different capitalisation practices impacting benchmarking comparisons.

JEN accepted the AER's final decision for its 2021-26 price reset and continues to support the AER's preferred approach in this paper for addressing the capitalisation issue in benchmarking. Continuation of the AER's preferred and principled approach provides regulatory certainty. It also lends support to Economic Insights' credible approach of benchmarking based on frozen 2014 capitalisation policies to avoid unintended incentives for DNSPs to change capitalisation policy solely to improve benchmarking position. The only incremental change JEN seeks is to include the opex/total inputs ratio alongside the opex/totex and opex/total cost ratios in deriving the Operating Environment Factor (**OEF**) adjustment under this approach.

In Annexure A, we provide the reasons for our support to the AER's preferred approach and the use of opex/total inputs ratio in addition to opex/totex and opex/total cost ratios. We are committed to working constructively with the AER and welcome any further queries in relation to this submission. Please contact [redacted] on [redacted] or [redacted] if you would like to discuss this letter further.

Yours sincerely

Ana Dijanosic
General Manager – Regulation

Annexure A

Background

Jemena proactively engaged with the AER on the impact of capitalisation practices on its benchmarking results during the 2021-26 revenue determination process. In its consultation paper the AER states -

> *Based on our further review of a range of qualitative and quantitative evidence, for the Jemena 2021-26 revenue determination final decision we considered that there was sufficient evidence of capitalisation practices being materially different between Jemena and the comparator DNSPs. We included an OEF adjustment to Jemena's benchmarking scores in recognition of this material difference…..To determine the OEF adjustment we used two of the opex/capital ratios (opex/totex and opex/total cost) but noted that the magnitude of our adjustment, and our final decision, did not change using an alternative method incorporating a third ratio (opex/total inputs).*

In addition to its approach used in JEN's decision, the AER has considered other options to address the material impact on benchmarking results from differences in capitalisation practices in its consultation paper. The AER assessed each option against the principles set out in the Expenditure Forecast Assessment Guidelines. Based on its assessment against these principles, the AER prefers its approach used for JEN's final decision over other options to account for the capitalisation differences.

Evaluation of options to account for capitalisation differences

The AER considered six options to account for the difference in capitalisation practices, which include both capitalisation policies and opex/capital trade-offs –

1. Benchmarking based on 2014 capitalisation policies with OEF adjustment to account for capitalisation difference using opex/capital ratios
2. Explanatory variable in econometric models that directly captures capitalisation practices
3. Benchmarking based on DNSP's current capitalisation policies with two variants – OEF adjustment to reflect current capitalisation policies or deriving efficiencies scores based on current capitalisation policies with an OEF adjustment to account for the remaining capitalisation differences
4. Benchmarking based on a common opex/capital ratio applied to all DNSPs
5. Benchmarking on the basis of a fixed proportion of overheads
6. Introducing a common capitalisation policy for benchmarking

These options are assessed against five principles – validity/fitness for purpose, accuracy/ reliability, robustness, transparency and parsimony. The AER's preferred option from its assessment is option 1, which is applying a post-modelling OEF adjustment using opex/capital ratios to benchmarking results based on 2014 capitalisation policies.

As demonstrated by the AER in Table 3 of its consultation paper, the AER's preferred option best meets the AER's five assessment principles in addressing the capitalisation issue among all six options presented.

However, the AER also highlighted that one potential downside of this approach is that benchmarking based on 2014 policies may not reflect current corporate structure or cost allocation methods as there is a growing divergence between the 2014 and current capitalisation policies, weakening the robustness and accuracy of this method. We note that if benchmarking was based on current capitalisation policies, DNSPs would need to backcast the entire historical data series according to the latest capitalisation policies, which may also undermine the reliability and robustness of data prior to the capitalisation policy change. In addition, capitalisation differences between DNSPs exist under both 2014 and current capitalisation policies. Benchmarking based on current capitalisation policies without OEF adjustment may still impact the comparability of benchmarking results between DNSPs, weakening the accuracy of results.

We agree with the AER that options 2 to 6 do not meet the AER's five assessment principles to the same extent as the AER's preferred option 1. This is because –

- Option 2 is infeasible due to a lack of data, as noted by the AER.

- Option 3 requires each DNSP to backcast its opex and capex series to 2006 every time a DNSP's capitalisation policy changes. To account for the remaining capitalisation differences, if the OEF adjustment is derived from opex/capital ratios, the OEF adjustments for all DNSPs need to be re-calculated whenever any DNSP changes its capitalisation policy. While option 3 has its merits and was supported by JEN previously in its 2021-26 regulatory proposal, we now understand that this approach is likely to create significant administrative burdens on DNSPs—to backcast historical data—and on the AER to update datasets and OEF adjustments for each capitalisation policy change.

- Option 4 involves pre-modelling data adjustments which normalise the opex series for capitalisation differences by applying a common opex/capital ratio to all DNSPs. JEN used this approach in its revised proposal for the 2021-26 price reset to illustrate the material impact of capitalisation differences on benchmarking results. It aims at assessing changes to DNSPs' opex efficiencies when all DNSPs follow the same capitalisation practice as opposed to their actual practices. However, while this approach is useful for understanding the impact of capitalisation differences on benchmarking results, it does not accurately reflect each DNSP's actual practices and therefore is not feasible for directly estimating efficient opex allowances under DNSPs' *actual* practices.

- Option 5, benchmarking based on a fixed proportion of overheads, has the same shortcomings as option 4, being not reflective of DNSPs' actual practices. This option only accounts for the difference in capitalisation policies but not opex/capital trade-offs. We agree with the AER that this approach does not adequately account for capitalisation differences.

- Option 6, introducing a common capitalisation policy, can only normalise for the capitalisation policies but not the difference in opex/capital trade-offs between DNSPs as noted by the AER and is therefore not fit for purpose. This approach also requires significant resources on both DNSPs and the AER.

Calculation of the OEF adjustment under option 1

In relation to the opex/capital ratios used to derive the OEF adjustment under option 1, the AER expressed its preference to rely on the average of two ratios – the opex/totex and opex/total cost ratios. Although the AER presented a third ratio – the opex/total input ratio, it excluded this ratio from deriving the OEF adjustment in JEN's 2021-26 opex decision.

In our view, none of the ratios are without some limitation, but all of them provide some valuable information on capitalisation differences that is relevant to the estimation of the OEF –

- Opex/totex ratio - The opex/totex ratio captures the relationship between annual flows of opex and capex. Any difference in capitalisation policies (i.e. how expenditure is classified as opex or capex) is directly reflected in this ratio. However, as capex investments deliver ongoing benefits over many years while opex delivers benefits only in the year it is incurred, the opex/totex ratio does not equally recognise the benefits delivered by opex and capex. For instance, capex invested prior to 2006 (long sample) that resulted in opex savings post-2006 would not be captured by the opex/totex ratio calculated based on 2006-2020 data. Similarly, capex invested in 2020 which reduces opex from 2021 onwards will not be fairly reflected in the ratio based on 2006-2020 data as it fails to recognise the future benefits delivered by the capex investment. Because of this lagged impact of capex, the opex/totex ratio does not fully capture the opex/capital trade-offs.

- Opex/total cost ratio - The opex/total cost ratio measures the relationship between opex and the annual user cost of capital. The annual user cost of capital comprises return on capital, annual depreciation and tax liabilities from capex investments. It provides a more balanced measure for valuing capex and opex since the annual user cost of capital reflects the cost of using the capex investment over one year which matches the utilisation period of opex. It therefore better reflects the opex/capital trade-offs than the expenditure-based opex/totex ratio. However, the annual user cost is impacted by the rate of return assumption and the impact differs across DNSPs. To illustrate the sensitivity of the rate of return assumption, when the rate of return is halved while keeping everything else constant, the change in opex/total cost ratios for different DNSPs range from 8% to 13%. The movement in the rate of return is driven by market conditions rather than opex/capital trade-offs or capitalisation policy changes. Therefore, although this measure better captures the opex/capital trade-offs, it is to some extent impacted by the rate of return assumptions that are less relevant to capitalisation practices.

- Opex/total inputs ratio - The opex/total inputs ratio is calculated by dividing the multilateral total factor productivity index by the partial opex productivity index –

$$Ratio = \frac{MTFP\ Index}{Opex\ MPFP\ Index} = \frac{Aggregate\ Output\ Index / Total\ Inputs\ Index}{Aggregate\ Output\ Index / Opex\ Input\ Index} = \frac{Opex\ Input\ Index}{Total\ Inputs\ Index}$$

  Apart from opex, the total inputs index includes physical measures of capital inputs such as underground distribution cables, underground sub-transmission cables, overhead distribution lines, overhead sub-transmission lines and transformers. Consequently, it is less impacted by initial asset valuations or variation in the WACC and the choice of depreciation profile. This method directly captures the ratio between the opex and the

physical amount of fixed assets used and therefore does not suffer from the drawback as opex/totex ratio of not capturing the lagged impact of capex investments. Nonetheless, like the other two measures, this measure is not perfect. It is affected by the assumed weights given to the various inputs, which necessitates that these weights are estimated in a transparent and robust manner.

Despite the drawbacks, the opex/total inputs ratio can more accurately reflect the opex/capital trade-offs than the opex/totex and opex/total cost ratios and should not be disregarded in deriving the OEF adjustment.

Overall, in our assessment –

- the opex/totex ratio reflects the differences in capitalisation policies as it measures the difference in the flow of expenditure
- the opex/total cost ratio reflects both capitalisation policy differences and opex/capital trade-offs since it measures the costs of the annual usage of capex and opex, and
- the opex/total inputs ratio better reflects the difference in opex/capital trade-offs and is less sensitive to rate of return assumptions as it measures the difference in the usage of physical assets and opex inputs.

All three ratios provide useful information on capitalisation differences through different lenses and therefore should be used together to inform an unbiased estimate of the OEF.

The AER provided two reasons for excluding the opex/total inputs ratio in the OEF calculation in its paper[1] –

- It is derived from index-based measures that aim at comparing indices through sample averages (multi-lateral comparison) instead of direct comparison between pairs of observations (bi-lateral comparison), and hence it is not suitable for deriving OEF adjustments
- It is insensitive to capitalisation policy change

For the first reason of multi-lateral versus bi-lateral comparison, the AER stated that –

> *While a useful gauge of capitalisation practices, we consider that, as an index-based measure, the opex/total inputs ratio may be problematic if used in quantification of any OEF adjustment. This is because the ratio is an index, comprised of two indexes (opex inputs and total inputs) rather than direct observations, as is the case for the opex/totex and opex/total cost ratios. Multi-lateral indexes of this type are designed with a focus on preserving comparability of productivity levels across all businesses and over time. This is enabled by doing all comparisons through the sample average (e.g. average opex across all businesses and years), rather than directly between pairs of observations (e.g. between two DNSPs in the same year). This property (to preserve transitivity at a cost of characteristicity) ensures multi-lateral comparability but may limit its usefulness in deriving an OEF adjustment for capitalisation where we are comparing bilaterally (i.e. one DNSP ratio against the comparator-average ratio).*

[1] AER, *How the AER will assess the impact of capitalisation differences on our benchmarking*, November 2021, Pg. 32

In our view, bi-lateral comparison is an example of multi-lateral comparison. That is, if two or more DNSPs can be meaningfully compared to each other through the sample average (i.e. multi-lateral), it implies that any two DNSPs can be sensibly compared to each other (i.e. bi-lateral). If the multi-lateral total inputs index fails to provide a sensible bilateral comparison between any two DNSPs, then the MTFP results—which relies on this total inputs index—would not give sensible comparisons between any two DNSPs.

In fact, the AER extensively uses the MTFP results to perform bilateral comparisons in its annual benchmarking reports, especially when presenting rankings of all DNSPs. The ranking is, by definition, a bilateral comparison of each DNSP's relative position to another. The AER's discussions on the movements of MTFP performances between DNSPs in the annual benchmarking reports rely on a bilateral interpretation of the MTFP indices. The total inputs index used in the MTFP measure is constructed multilaterally and used to draw conclusions bilaterally on the difference in productivity levels between DNSPs. We believe the same logic applies to comparing capitalisation differences between DNSPs using the total inputs index. The total inputs index is a multi-lateral index used to estimate the opex/total inputs ratio which can be used to draw bilateral conclusions on the capitalisation differences between DNSPs. Therefore, the multilateral nature of the total inputs index should not impact the usefulness of the opex/total inputs ratio in deriving the OEF adjustment, similar to how MTFP measure is used for comparing productivity levels between DNSPs in the AER's annual benchmarking report.

The AER's second reason for excluding the opex/total inputs ratio is that it is insensitive to capitalisation policy change. The AER, however, also states that the OEF adjustment is expected to capture not just capitlisation policy impact but also opex/capital trade-offs. As discussed above, the opex/total inputs ratio is more useful in capturing the opex/capital trade-offs than the opex/totex ratio which is useful for capturing the capitalisation policy impact. Therefore giving weight to both opex/totex and opex/total inputs ratio along with opex/total cost ratio will help capture the impact of both capitalisation policy impact and opex/capital trade-offs in a more balanced and unbiased way.

The AER, in JEN's final 2021-26 opex decision, proposed an alternative method to calculate the OEF adjustment using a weighted average of all three ratios based on 50% weight to opex/totex ratio, 25% weight to opex/total cost ratio and 25% weight to opex/total input ratio. While we believe that an equal weighting to the three ratios would be a superior approach, the above weighted average approach will better reflect capitalisation differences compared to the use of just two ratios.

Conclusion

In summary, we support the AER's preferred option (option 1) to address the capitalisation issue but recommend that it uses all three ratios – opex/totex, opex/total cost and opex/total inputs ratios – to estimate the unbiased OEF adjustment under this option.