11 March 2022

Mr Warwick Anderson
General Manager, Networks Finance and Reporting
Australian Energy Regulator
GPO Box 3131
**Canberra ACT 2601**

By email: RateOfReturn@aer.gov.au
Cc:

Dear Mr Anderson,

**Re: Response to AER Rate of Return Final Working Papers**

Thank you for the opportunity to respond to the AER's Rate of Return Final Working Papers that were published in December 2021 as part of the 2022 Rate of Return Instrument (RoRI) review.

We note the particular importance of this review in light of the very significant investment that is required in Australia's energy networks over the next decade to support:

- Australia's decarbonisation objectives; and
- large and increasing replacement capital programs.

This submission reflects the views of the Australian Gas Infrastructure Group, SA Power Networks, CitiPower and Powercor and United Energy (the businesses). We endorse the ENA and APGA submissions to this stage of the process and provide our perspectives on the key issues.

**The context for the current review**

In previous submissions, we have noted that the review process to date has identified that there are some fundamental problems with the way the 2018 RoRI has operated in the financial market conditions that have developed over the last three years. These problems were most obviously manifest in the SAPN decision in 2020 which involved a record low allowed return on equity, materially below that allowed by other comparable regulators. [1]

The ENA submission[2] sets out the following context for the 2022 Review:

- The AER's allowed return on equity is currently lower than at the time of any previous review.

[1] Brattle, June 2020, *A review of international approaches to regulated rates of return*.
[2] ENA, March 2022, *ENA submission on final working papers.*

- The Brattle report commissioned by the AER demonstrated that the AER's allowed return on equity was, by every metric, lower than that of all comparable regulators examined. Brattle concluded that the AER's approach was "not as effective" as that of other regulators.
- The independent expert valuation reports prepared as part of the recent Spark Infrastructure and AusNet Services transactions concluded that the current market cost of equity capital (with gearing at 60%) is 200 basis points above the AER's current allowance.

Moreover, there are particular challenges facing all stakeholders at the time of this review. Notably, the number of domestic comparator firms is rapidly approaching zero, with data for all three of the 2018 comparators affected by transaction activity and the volatility associated with a global pandemic over recent years. In addition to the pandemic, recent geo-political events are already having an impact on world energy markets, interest rates and inflationary expectations more broadly.

Thus, there are some real challenges for the current AER to address.

The remainder of this submission sets out our views on what we consider to be the key issues at this stage of the review process.

**Potential misinterpretation of RAB multiples**

We are particularly concerned about the potential misinterpretation of the RAB multiples observed in recent transactions, and the AER's conclusions about the adequacy of its current allowed returns. We consider the recent transaction evidence to be highly relevant and informative. Consequently, the message that is taken from this evidence is important in providing useful context for the review.

The AER has recently stated that:
*We cautiously note that the information would suggest our current and expected rates of return are at least sufficient (as part of the overall regulatory compensation to investors) and potentially higher than that needed to attract investment.* [3]

And further that:
*On face value, our return on equity is at the lower end of rates of return allowed by regulators internationally. In an environment of international competition for capital this observation leads us to consider whether our return is sufficient to attract necessary investment. However, this seems difficult to reconcile with the recent takeover offers for Spark and AusNet.* [4]

Our view is that there is no basis for drawing such a conclusion from these RAB multiples. The recent transaction evidence provides very strong evidence of the *inadequacy* of the AER's current regulatory allowances.

The aggregated RAB multiple that the AER has cited reflects not just the present value of expected regulatory allowances, but also the present value of incentive payments, revenue from unregulated assets and future projects, expected increases in future AER allowances, and other things.

It is entirely possible that the present value of expected regulatory allowances is less than the RAB, even though the aggregated RAB multiple is above 1 – due to these other sources of value.

[3] AER, December 2021, *Overall rate of return, equity and debt omnibus: Final working paper*, p. 131.
[4] AER, December 2021, *Overall rate of return, equity and debt omnibus: Final working paper*, p. 139.

Consequently, RAB multiples have zero informative value unless the present value of expected regulatory allowances can be fully and transparently separated from other sources of value.

But such a disaggregation of the RAB multiple is unnecessary because we already have direct estimates of the market cost of equity capital. Independent expert estimates of the market cost of equity capital have recently been prepared for two electricity network businesses that are regulated by the AER. Both report that the current market cost of equity capital is materially higher than the AER's current regulatory allowance.

**The term of the allowed return on equity**

The AER is contemplating the possibility of moving from its longstanding practice of adopting a 10-year risk-free rate to a 5-year rate. The Concurrent Evidence sessions on this issue identified that the AER is considering two different approaches:

- The first approach is to set allowed return on equity to match the market cost of equity capital. Since the observed market practice is to use a 10-year risk-free rate, the regulatory allowance should also be based on a 10-year rate. Matching the regulatory allowance with the market cost of capital achieves NPV=0.
- The alternative approach, due to Dr Lally, is that investors should use a 5-year risk-free rate because they should value regulated assets as the present value of (a) the regulatory allowances over the 5-year regulatory period, plus (b) the end-of-period RAB. Since no cash flows beyond year 5 are required for this exercise due to the assumptions in his model, a 5-year discount rate would be appropriate.

This raises the question of whether the regulator should:

- Consider the approach that investors do adopt, based on evident of market practices; or
- Consider the approach that Dr Lally says investors <u>should</u> adopt, based on his assumptions and derivations.

In our view, there remains very strong grounds for maintaining a 10-year term:

- The AER has considered this issue several times before (2009, 2013 and 2018 rate of return reviews) and has adopted a 10-year risk-free rate in every one of its decisions to date.
- A 5-year term is generally not used by Australian regulators and in a number of decisions over the last decade it has been explicitly abandoned.
- In its 2018 review, the AER noted that a 10-year term:
    - Reflects the actual practices of investors, including investors in regulated assets;
    - Is more consistent with the theory of the SL CAPM;
    - Best reflects well accepted academic literature; and
    - Best supports the National Electricity Objective (NEO) and National Gas Objective (NGO) within the context of the NPV=0 principle.
- A ten-year risk-free rate (or longer) is standard regulatory and commercial practice and is recommended by leading textbooks, including Australian and regulatory textbooks.

- The Network Shareholder Group has submitted that a 10-year term is standard practice among investors.
- The independent expert valuation reports prepared in relation to the Spark Infrastructure and AusNet transactions both adopted the standard market practice of a 10-year term.
- And the ENA's submission explains that Dr Lally's assumptions and derivations are in fact *inconsistent* with accepted finance theory. Also, the Concurrent Evidence sessions identified issues with the strong assumptions that underlie Dr Lally's derivations and with his conclusions and recommendations.
- And the ENA's submission explains that Dr Lally's assumptions and derivations are in fact *inconsistent* with accepted finance theory. Also, the Concurrent Evidence sessions identified issues with the strong assumptions that underlie Dr Lally's derivations and with his conclusions and recommendations.
- No stakeholder has advocated for a change in the term.

In our view, the case for a change in the term of equity falls well short of any reasonable threshold.

**Implementation of the CAPM**

*Have regard to all relevant evidence*

We agree with the AER's proposed approach of considering systematically all relevant estimation methods, financial models, market data and other evidence[5] when implementing the CAPM. In this regard, the Brattle and CEPA reports commissioned by the AER conclude that the AER should have regard to a wider range of relevant evidence when estimating the MRP, with both reports being quite critical of the approach adopted in 2018.[6]

*Have regard to how the CAPM is implemented in practice*

It is also important to consider how the CAPM is implemented in practice. Market professionals and other regulators do not implement the CAPM in a mechanistic fashion based on a particular statistical estimate of each parameter.

The businesses submit that there is important information in observing how market professionals and other regulators exercise judgment in their implementation of the CAPM.

*Have regard to documented weaknesses and biases in the CAPM*

It is also important to consider the known weaknesses of the CAPM. The Economic Insights report presents the example of low-beta bias in this regard. That report notes the well-documented evidence that actual returns on low-beta stocks are persistently higher than a mechanistic implementation of the CAPM would suggest, and observes that expert judgment is required in response:

[5] AER, July 2021, *Equity Omnibus*, p. 28.
[6] Brattle, June 2020, *A review of international approaches to regulated rates of return*; CEPA, June 2021, *Relationship between RFR & MRP*.

*An understanding that mechanistic application of the CAPM must be supplemented by expert judgement casts a different light on **the academic literature showing a flat relationship between beta and expected return**. Academic studies using large samples are constrained to rely on estimates of beta based on historical data. The significant methodological issues in identifying, obtaining and using historical data to estimate beta lower the likelihood of finding an empirical association between beta estimated from historical data and future return. Expert judgement is needed to ameliorate the issues. **That is, estimates of beta obtained from regression analysis are a starting point, not the end point, for estimating beta**.* [7]

**Equity beta**

The fact that the AER's comparator set will have only a single live member at the time of the 2022 RoRI is one of the most significant issues to be addressed by the AER during the 2022 review period. As the set of domestic comparators becomes smaller (now consisting of a single live firm), it must logically receive less weight relative to the other evidence that is available.

Other Australian and NZ regulators have recognised the problem of a very small set of domestic comparators and have regard to international comparators.

We agree with the ENA submission that it is reasonable to have some regard to this other relevant evidence, and the way that comparable regulators use it, as the confidence in the domestic comparator's declines. It is difficult to see how one could have so much confidence in the reliability of the remaining domestic comparator evidence (now consisting of APA only, whose comparability has previously been questioned by the AER) that no regard need be had to any other evidence.

As the diminishing data set is a known problem today, stakeholders would benefit from a clear articulation of how the AER considers that beta would be estimated in future reviews when the domestic comparator set will be clearly insufficient and potentially non-existent. In this regard, if there is evidence that would be relevant to informing the estimation of beta in future reviews, it should also be relevant to the current review process.

**MRP**

Our view is that the MRP allowance in the 2022 RoRI should be set by having real regard to all relevant evidence. The AER should apply its regulatory judgment, considering the strengths and weaknesses of each piece of evidence to produce an MRP allowance at the time of the RoRI.

Specifically, the MRP allowance should not be set (explicitly, or in effect) on the basis of the HER evidence alone. That approach embeds the strong assumption that the MRP is effectively constant over time, which is inconsistent with the evidence and advice before the AER, including the recommendations from its consultants and the Concurrent Evidence experts.

The DGM approach has a strong theoretical basis and provides useful evidence about the forward-looking MRP. DGM specifications that are economically sensible, and which address the AER's previous concerns, should be used to inform the MRP allowance in the 2022 RoRI.

[7] Economic Insights, June 2021, *Methodological issues in estimating the equity beta for Australian network energy businesses*, p. 28, emphasis added.

**Arithmetic vs. geometric means**

The ENA submission provides what we think is compelling evidence to support the exclusive use of arithmetic means when implementing the HER approach to estimating the MRP. Leading textbooks explain why the arithmetic mean should be used and the geometric mean should not. A Harvard Business School case makes the same point. Dr Lally has explained why the arithmetic mean must be used in reports to the AER and the recent Concurrent Evidence sessions.

Our understanding from the Concurrent Evidence sessions is that the only circumstances in which any experts would conceive of placing any weight at all on the geometric means is:

- If there is some compounding of returns in the AER's process of setting allowed returns; or
- If there is significant serial correlation in the time series of historical excess returns.

However:

- There is demonstrably no compounding of returns in the AER's process. The AER provides an allowed return for each year, not a compounded return over several years; and
- The AER implicitly assumes no serial correlation in the way it uses the HER evidence. In particular, the AER's HER estimate is independent of recent HER observations.

If the AER does intend to have some regard to the geometric mean of historical excess returns, it should either:

- Identify where compounded returns, rather than year-by-year returns, are used within the regulatory process; or
- Document the serial correlation in historical excess returns and demonstrate how the AER's approach to using HER data has been changed to reflect that serial correlation.

**Network debt index**

We support the continued use of third-party data sources for the return on debt, and the continued use of a benchmark 10-year term and a benchmark BBB+ credit rating. The effectiveness of this approach is clearly evident in the AER's and industry analysis of network debt data, which shows the AER's regulatory allowance almost exactly matches the average costs that have been incurred by networks.

We also note that maintaining a 10-year benchmark term would avoid the need to implement a new set of bespoke transition mechanisms. It would also avoid the regulatory disruption of transitioning to a new term even before networks have completed their transition to the current term.

**Weighted trailing average return on debt allowance**

We understand that the AER's proposed change in the weights applied to each tranche of debt in the trailing average allowance is designed to help support the commercial viability of significant new capital expenditure in the event that interest rates rise above the trailing average allowance.

However, the proposed weighting scheme is insufficient, in and of itself, to address this commercial viability problem. Indeed, the ENA submission explains how the proposed weighting schemes may actually *exacerbate* that problem. Changing the weights applied to each tranche of debt should not be treated as any sort of 'silver bullet' remedy for the commercial viability problem.

The proposed weighting scheme will also introduce additional layers of complexity, and the benefits of this are likely to be very limited for most network circumstances (particularly distribution networks).

Notwithstanding the above, should the AER continue to explore a weighted trailing average, it should demonstrate that its proposed change will materially 'change the dial' on mitigating any risks associated with an investment 'strike'. That is, the proposed changes should only be considered if they will have a demonstrably positive impact. This would require extensive consultation on this issue between networks, consumers and the AER (with a focus on how the AER's rate of return allowance might support the commercial viability of major new projects).

No change should be made to the weights as part of the RoRI process in the absence of a more holistic consideration of the problem that the AER is seeking to address.

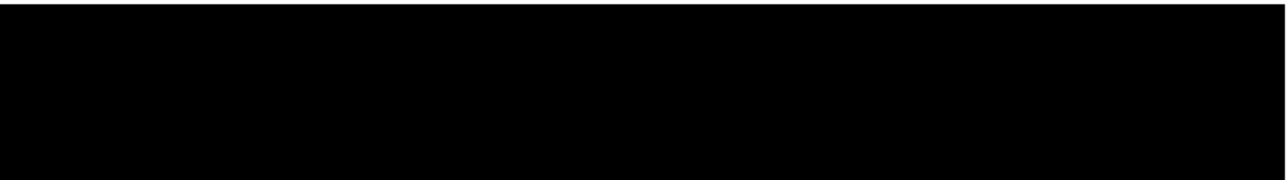
**The need to ensure that the RoRI is robust to different scenarios**

The ENA submission explains the importance of scenario analysis in the context of the RoRI. Because the RoRI is binding for four years, it is essential that it be robust to the range of scenarios that might reasonably be contemplated to eventuate over that period.

The current economic and geo-political environment makes it even more important to ensure that the 2022 RoRI is robust to a range of future scenarios.

We again express our appreciation for the opportunity to provide this submission for consideration by the AER, and we look forward to actively contributing to the remaining stages of the 2022 RoRI consultation process.

We look forward to engaging further with the AER in respect of the issues raised above. If you require any further information or would like to discuss this submission, please contact Jeff Anderson on

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