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Dear Jason,

Thank you for this opportunity to address your recent Issues Paper in respect of the appropriate rate of return for the Pilbara networks of Horizon Power and Alinta. Although we are not directly affected by the AER's decisions in respect of these networks, we were involved in the ERA's Rate of Return Instrument (RoRI) in 2018, and have been heavily involved in the process the AER has been undertaking over the past 18 months or so as it moves towards its 2022 RoRI.

We note that the Issues Paper implements the ERA's 2018 RoRI, updating only input data, and thus does not reflect the new evidence considered thus far by the AER. Our comments therefore reflect some of the emerging evidence from the AER process, as relevant to the context of the Pilbara networks, to assist the ERA in making the best rate of return decision possible.

Our response below follows the ERA's 9 questions from the Issues Paper with two exceptions; we provide an update on evidence from the AER's RoRI process on the market risk premium (in particular its relationship with the risk free rate) and on the use of cross checks for the return on equity. These two topics have received significant attention in the AER's process.

We now turn to the nine questions asked by the ERA, and the two additional topics.

Do you support the use of a five-year term for the WACC for the Pilbara networks? If not, please explain why and provide details of your alternative approach.

The Issues Paper (see [71]-[77]) suggests that only the use of a five-year term for the risk-free rate in determining the rate of return on equity will meet the "NPV=0 principle" and that any longer-term government bond will overcompensate the networks. This is incorrect. Rather, it is the case that, if a particular set of assumptions favoured by one consultant in a series of papers are true, then setting the term of the risk-free rate equal to the term of the regulatory period will result in meeting the "NPV=0 principle".¹ However:

- The original paper, by Lally in 2004, is not considered a mainstream view in the economic literature, having been cited only 11 times; nine by the consultant himself in reports to regulators advocating his approach and twice by other academics, who disagree with him.²
- The key assumption which underpins the result is that equity has a term structure.³ However, the model the ERA uses to determine the allowed return on equity, the CAPM, is a single period model with no term structure and thus fundamentally inconsistent with the assumption underpinning Lally's results. The proposed ERA approach is therefore not logically consistent.

¹ The NPV=0 principle in a general sense means little more than ensuring that allowed revenues equal efficient costs. It is entirely unrelated to the tenor of the risk-free rate outside the work of one consultant.

² See ENA, 2021a, *Term of the Rate of Return: Response to the draft AER working paper*, 2 July 2021, p36, available [here](#).

³ See APGA, 2021a, *APGA Submission to the AER on Draft Working Papers on Term and the Rate of Return and Cashflows in a Low Interest Rate Environment*, 2 July 2021, p7, available [here](#).

- The use of a five year term is not a common or well accepted regulatory approach.⁴ The only Australian regulator currently applying it is the ERA and internationally, we understand that only the New Zealand Commerce Commission does so.
- The use of a longer term government bond is standard practice amongst practitioners and standard in leading finance textbooks.⁵
- Whilst the AER has been reconsidering the term of the risk-free rate in its current review and in the context of a change in its approach to estimating inflation, there is little support for the change amongst its stakeholders, including consumer groups, who have drawn attention in public forums to the AER's lack of evidence for the change.⁶

Further detail on these points can be found in the documents footnoted below.

Do you support the use of an energy network benchmark efficient entity for both Pilbara networks? If not, please explain why and provide your proposed alternative approach. If not, are there risks not adequately captured and how might they be quantified?

The definition of the benchmark efficient entity contained in [86] of the Issues Paper, which is the same definition that the ERA uses for other energy networks, appears broadly appropriate. The only difference we would suggest would be to replace "Operating within Australia" with "Operating within remote regions of Australia". We are aware that there is some crossover with the fourth component which picks up risks in the context of the Pilbara. However, we think it is a useful framing tool to direct focus on the remote nature of the networks, as this allows for a more targeted search of relevant comparators.

Do you agree that the energy networks benchmark entities are suitable for the Pilbara networks? If not, please explain why. Are there other entities that could be included in the benchmark sample?

We do not have any particularly strong views in respect of the scale and type of relevant risks which are associated with the operation of the two businesses in the Pilbara. However, based on the ERA's own description in pages 4 to 6 of the Issues Paper, it seems highly unlikely that these networks would have the same risk exposure as, say, Western Power has in the SWIS. We think the ERA is correct in its Issues Paper to carefully step through potential causes of differences in risk, rather than just assume similarity with regulated energy networks.

We note that the ERA has some experience of regulating similar infrastructure in very different circumstances in respect of its role in rail networks, where it regulates the Perth passenger network, the ARC infrastructure freight network in the South West of WA, and Pilbara heavy-haulage networks. In this instance, the ERA makes use of a different set of comparators when determining the appropriate rates of return.⁷

We note that this will have consequences for the set of firms which are chosen as comparators, and that means that the list of firms in [89] of the Issues Paper may need to be amended.

Do you agree that the two Pilbara networks' risk profiles are not significantly different? If not, please explain why and how differences from the benchmark sample could be quantified.

We do not have sufficient information to provide a detailed answer to this question.

⁴ See AER, 2021a, *Term of the Rate of Return: Draft working paper, May 2021, Table 2, p 21, available [here](#).*

⁵ See ENA, 2021a, p24 and 28-9 respectively.

⁶ See AER 2021b, *Term of the Rate of Return and Cashflows in a Low Rate of Return Environment: Final working paper, September 2019, p47 & 26-32, available [here](#).*

⁷ See <https://www.erawa.com.au/rail/rail-access/weighted-average-cost-of-capital>

Do you support the use of a gearing level of 55 per cent for the Pilbara networks? If not, please explain why and your alternative approach?

We have no particular concerns around the finding of a 55% gearing for the set of firms in Table 2 of the Issues Paper.⁸ However, as noted above, it is not clear that the BEE for each of the Pilbara energy networks will be the set of firms in the Issues Paper used to determine gearing and other WACC parameters. Once the sample set issue is resolved, the approach towards determining gearing for that set described in [101] to [115] appears reasonable, notwithstanding the issues of detail covered in the footnote below.

Do you support the use of a 0.6 equity beta for the Pilbara networks? If not, please explain why and your alternative approach to calculating the equity beta?

As noted above, the first question to ask is whether the BEE is correct; the correct beta for the Pilbara networks will be a function of the relevant comparators in respect of risk profiles.

There is also an issue of whether, given the choice of comparators used in the Issues Paper, 0.6 is the best forward-looking estimate of beta. The ERA does not provide much detail on how the estimate of 0.6 has been determined, save for a reference back to its 2018 determination. However, the number looks very similar to that which the ENA shows for the five years to March of 2020, which is an ordinary least squares estimate.⁹

This is potentially a concern. As the ENA point out, the months of February and March 2020, when COVID-19 first hit the Australian markets, appear to have had an out-sized result on an OLS estimate of beta using five years of data. It seems unlikely that this once-in-a-century event is reflective of the risks in the market over the next five years, and the ENA suggests several different approaches which can deal with this issue such as longer time periods and regression methods less susceptible to outliers.¹⁰

It is not clear from the Issues Paper whether the ERA has incorporated issues concerning COVID raised by the ENA in its estimate of 0.6 as the discussion in the Issues Paper on beta is brief. For this reason, we raise this issue as it warrants clarification from the ERA; noting that it may be of concern regardless of which companies the ERA chooses to be part of its comparator set.

Do you support the use of a 10-year term of debt for the Pilbara networks? If not, please explain why and your alternative approach?

This is a question of the comparator set the ERA uses. For regulated energy firms, it looks to market data, and finds that ten years is the efficient tenor of newly-issued debt and this underpins its use. The ERA should follow the same process it follows for the regulated energy firms to determine the efficient tenor for debt. Whether the result is ten years or not is an out-working of this piece of analysis.

Do you support the use of a benchmark credit rating of BBB+ for the Pilbara networks? If not, please explain why and your alternative approach?

As with the tenor of debt, the answer to this question is highly dependent upon which firms are in the comparator set. We do not have an issue with the way in which the ERA came to the conclusion that BBB+ was the appropriate credit rating for regulated energy firms. However, whether this is the right

⁸ We note, in the AER's RoRI process to date, there has been some debate about the inclusion or exclusion of subordinated debt when determining gearing, and we support the ENA's views on this (see ENA 2021b Overall Rate of Return: Response to AER's draft overall rate of return omnibus working paper, 3 September 2021, pp24,27, available [here](#)). However, it is not clear whether this fine level of detail is relevant for the ERA's conclusions in Table 2.

⁹ See ENA 2021c, Estimating the Cost of Equity: Response to AER's draft equity omnibus paper, p81, available [here](#). Note that the ENA data suggest beta increasing over 2021 (see *ibid* p82, noting that this is a one-year beta), potentially coming closer to the ERA's estimate.

¹⁰ See ENA 2021c, pp81-85

answer in respect of the Pilbara energy networks depends on the results of a similar analysis of a potentially different dataset.

Do you support the use of a trailing average debt risk premium of 1.987 per cent for the Pilbara networks? If not, please explain why and your alternative approach?

There are two aspects to this question. Firstly, there is the methodology used to determine the value, and secondly, there is the question of the value itself.

In respect of the methodology that the ERA uses, its “revised bond yield approach”, we believe it is broadly fit for purpose.

In terms of the value, we do not have access to a Bloomberg terminal in order to replicate the ERA’s analysis and thus cannot check its calculations. However, the broader issue is whether the set of bonds represents the debt risk faced by the BEE. As with gearing and beta above, this needs to be established first, and the value for the debt risk premium follows.

Developments in the estimation of the market risk premium and its relationship with the risk-free rate

The ERA calculates the MRP (6%) using the approach from its 2018 RoRI. However, it does not appear that the ERA has considered any of the evidence which has emerged through the AER process over the last 18 months, particularly the relationship between the risk-free rate and MRP and the nature of this relationship in a low rate of return environment.

Evidence of such a relationship was rejected in 2018, but more recent work by the AER’s consultants suggest that this may have been premature, and that in fact the MRP is not stable and that there is no good evidence in theory or in empirical evidence for an assumption that the MRP is independent of the risk-free rate.¹¹ Whilst the estimation of what the relationship is, and how stable it might be through time is still an open question and subject to its own challenges, it no longer appears appropriate for this issue to be ignored, and we look forward to engaging with the ERA on this point as the current review continues.

In respect of the methodology the ERA has used, we have some issues where new evidence may assist in refining the ERA’s approach:

- The ERA forms the lower bound of its MRP range by using an average of the highest geometric and lowest arithmetic mean of the relevant historical series. This is an entirely arbitrary way of combining these information sources, but more than this, there is no evidence that the geometric mean should be used at all. APGA point how it is incorrect in theory to use the geometric mean and the ENA point to numerous textbook examples which make it quite clear that it is incorrect in practice.¹²
- We agree with the use of the DGM, but note that the ENA has suggested a new version of this model which deals with past criticisms about difficulties in determining the dividend growth rate.¹³ We note that it also appears to provide lower estimates than the ERA’s current approach.
- We disagree with the ERA’s approach to using conditioning variables to choose the point on its range. In the first instance, we are aware of more robust ways to consider information from things like VIX in the academic literature than just eyeballing it. More importantly, however, it

¹¹ See, in particular, CEPA, 2021, *Relationship Between RFR and MRP*, 16 June 2021, pp6-7, available [here](#).

¹² See APGA, 2021b, *APGA Submission to the AER Rate of Return Omnibus Papers*, 3/09/2021, Appendix C, available [here](#), and ENA 2021 20021b pp43-8.

¹³ See ENA 2021c, p54-6.

is not clear that measures of volatility, are linked to MRP in the manner implicit in the ERA's approach.¹⁴

We believe that the approach suggested by the ENA offers a more robust way to firstly form a range for MRP, and then to choose a point within it, and we would suggest that this paper could usefully inform the process for the Pilbara networks.¹⁵

Developments in cross checks

The second area of focus in the AER process has been on cross checks, particularly for the return on equity. The CAPM, which forms the centerpiece of the ERA's approach, may be venerable, but its flaws have been manifest in the literature almost since its inception, and most of the parameters which form inputs to the model are estimated only with great imprecision. This means that judgement is required of regulators when they move from a range to a point estimate.

Cross checks are a prudent way to review those exercises of judgement. In the AER's process both APGA and the ENA suggest useful approaches to cross-checking equity estimates, and include worked examples which may be useful to the ERA.¹⁶

We hope the above is of assistance as the ERA develops its approach to the rate of return for the Pilbara networks. Please feel free to contact us if you would like to discuss any aspect of this letter.

Yours sincerely,



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¹⁴ See AER 2021c, *Equity Omnibus: Draft working paper, July 2021 p27*, available [here](#), and Gibbard, P, 2013, *Estimating the Market Risk Premium in Regulatory Decisions: Conditional versus unconditional estimates*, ACCC/AER Working Paper 9, 9 September 2013, p20-23, available [here](#).

¹⁵ See ENA 2021b, *ibid*, pp40-64.

¹⁶ See APGA 2021b, *APGA Submission to the AER Rate of Return Omnibus Papers, 3 September 2021*, pp 14-17, available [here](#), and ENA 2021c pp101-106