Submission

Equity Omnibus

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Dear Mr Anderson

Ausgrid welcomes the opportunity to provide this submission to the AER's working paper on the return on equity. The rate of return instrument is one of the most significant decisions made by the AER in terms of its effect on both outcomes for customers and the financial stability of network businesses.

As highlighted in other industry and investor submissions, returns have been severely constrained since the 2018 rate of return instrument. It is critical that the allowed return on equity is set a level that is robust to all economic circumstances and allows networks to support the energy market's transformation, promote efficient investment and provide customers with desired outcomes.

Our submission focusses on issues raised by the AER with respect to MRP, its relationship to the risk free rate, and equity beta. The lack of domestic comparators is becoming a real issue as market developments diminish the number of live firms, which provide the most recent data about systematic risk faced by the industry. We draw on observations made by the AER's consultants as well as other relevant evidence.

We look forward to engaging with the AER and other stakeholders throughout the rate of return review process. If you would like to discuss our submission in more detail, please contact Fiona McAnally on [redacted] or [redacted].

Yours sincerely

[redacted]

Rob Amphlett Lewis
Chief Customer Officer

Introduction

The rate of return instrument is one of the most significant decisions made by the AER in terms of its effect on both outcomes for customers and the financial stability of network businesses. The consequences of setting the rate of return too high or too low can have significant effects on both.

The Rate of Return Instrument 2022 (RORI) is occurring during the transformation of the energy sector, with changes in the NEM over the next 5 to 10 years likely to have long term impacts for customers. The next few years will be critical, as the pace of transition in the energy sector increases, and the window for efficiently transitioning the sector through prudent and well-timed investment closes. For example, over the coming years there is an emerging need to invest in the capabilities required to efficiently integrate distributed energy resources (DER). Investing in reliability, resilience and the capability to flexibly respond to extreme weather risks is also an emerging need for networks, as global mean temperatures continue to rise.

We appreciate the AER opening some equity estimation issues for discussion based on advice in expert reports, particularly regarding the market risk premium (MRP). We provide an overview of Ausgrid's views in this paper and more technical commentary is provided in the ENA submission, which is also supported by Ausgrid taking into account the views outlined below.

Estimating MRP

The AER's working paper and consultant reports identify three main methods to directly estimate or derive MRP that are used by or could be considered by the AER:

- Fixed MRP;
- Fixed total market return (TMR); and
- Dividend growth model (DGM).

Fixed MRP – AER current approach

This is the current method employed by the AER and involves calculating a fixed MRP and adding it to a risk free rate. This method assumes there is no relationship between MRP and the risk free rate. That is, MRP remains constant as the risk free rate rises and falls. In the current RORI, the AER determines MRP by calculating average historical MRPs over a long term. It is known as the historic excess returns (HER) method because it is a measure of returns above the risk free rate that have occurred in the past. MRP is added to an on-the-day risk free rate.

Fixed TMR – alternative approach

A fixed TMR estimates real market returns of the share market from historical market data inclusive of the risk free rate, and therefore assumes that market returns do not change with changes to the risk free rate. The MRP is calculated by taking the difference between the TMR and risk free rate. So, for each change in the risk free rate, the MRP would change in in the opposite direction by the same amount.

Dividend Growth Model – alternative approach

This method is entirely forward looking because it uses current information and forecasts to calculate the implied TMR based on forecasted dividends. Under this method, there is no assumption about the relationship between risk free rate and MRP. MRP is an output of the model, calculated by subtracting the risk free rate from the TMR.

With these three methods in mind, the AER has indicated that it is open to hearing stakeholder views on whether:

- there might be a relationship between the risk free rate and MRP, the nature of the relationship and whether it could be implemented in the 2022 RORI;[1]and
- the estimate of MRP could be improved by using DGM.[2]

Relationship between the risk free rate and MRP

Historically, industry has maintained, based on empirical evidence, that there is some level of (but not a one-to-one) inverse relationship between the risk free rate and MRP. On weighing the evidence the AER's consultant CEPA concluded that there is no good evidence that the MRP should be assumed to be independent of the risk free rate.[3] There are also several empirical studies that identify some level of negative relationship, which are supported with theoretical explanations to explain the observed relationship. These are explained in detail in the ENA submission.[4]

Based on the evidence that there is a relationship, it may be considered that an updating mechanism throughout the RORI is appropriate so that rates of return reflects the latest market conditions at the time of each determination. It is important to note that while there is an empirical inverse relationship, this cannot be analysed and corrected for in isolation from the estimation method of MRP. That is, the starting point of the MRP influences how any adjustment to MRP should be made over the RORI period as discussed below.

Estimating MRP using DGM

As noted above, the current MRP estimate uses the HER method with no weight given to other evidence. This does not take account of expectations of future market conditions which is relevant when setting a rate of return that will be in effect for up to 9 years.

Ausgrid supports the DGM being used as one of the sources of evidence to inform the estimation of MRP. This view aligns with industry submissions to previous rate of return reviews/instruments as well as AER consultant Brattle who advised that it would be beneficial to incorporate some forward looking evidence (through use of the DGM) to estimate MRP.[5]

The AER gave no weight to DGM evidence in the 2018 RORI because it was concerned that it is sensitive to growth rate assumptions and could be upwardly biased.[6] The ENA has considered these issues and has produced a model that estimates DGM using a growth rate that is back-solved to produce a long term average MRP that is consistent with the long term average historical estimate adopted by the AER. This means there is no assumption to be made about the growth rate, because it is an output of the model, and there can be no upward bias because the long term average of the DGM model is the same as the HER approach adopted by the AER. The ENA submission contains details of the model.[7] Ausgrid believes this calibrated DGM is an appropriate model to estimate MRP for the purpose of the 2022 RORI, as an additional method to be given weight alongside HER.

[1] AER, Equity omnibus draft working paper, July 2021, p 28.
[2] AER, Equity omnibus draft working paper, July 2021, p 8.
[3] CEPA, June 2021, Relationship between RFR and MRP, pp. 6-7.
[4] ENA, Response to equity omnibus paper, 3 September 2021, pp 15-38.
[5] Brattle Group, A Review of International Approaches to Regulated Rates of Return, June 2020, p 59
[6] AER, Equity Omnibus, July 2021, pp 25-26.
[7] ENA, Response to equity omnibus paper, 3 September 2021, pp 52-55.

Giving weight to all three methods

As noted above the AER currently pairs a long term historic MRP estimate with an on the day risk free rate. If the AER were to maintain its current methodology, the historic MRP should be matched with a long term historic risk free rate. This would mean both components are estimated on a consistent basis and would manage the issue that returns do not move one-for-one with the risk free rate.

Based on the evidence, we believe that the relationship between the risk free rate and MRP lies somewhere between the fixed MRP and TMR approaches. We also believe that forward looking data, and therefore the DGM, has a role to play in estimating MRP as it brings future expectations into the equation. This leads to the conclusion that all three methods should be given weight in the AER's estimate of MRP.

Adjustment mechanism over the RORI period

As noted above, the MRP starting point is critical to the relationship between MRP and risk free rate. Therefore, it is difficult to put forward how a specific mechanism could work. We outline below the principles behind how the starting point MRP influences the mechanism to implement a relationship. A more detailed submission can be made once the AER confirms how it will implement MRP.

To set an update mechanism that could be used throughout the RORI period to reflect the relationship between risk free rate and MRP, an offset factor would need to be calculated. The offset factor would be applied to the starting point MRP based on the difference between the risk free rate at the time of the RORI and the risk free rate at time of each decision.[8]

As noted above, the offset factor would be dependent on the MRP methodology:

- the offset factor for a fixed MRP would be 0, because it assumes no relationship between the risk free rate and MRP;
- for a fixed TMR the offset factor would be -1, because it assumes a perfect negative relationship between risk free rate and MRP; and
- for the DGM the offset factor would be quantified empirically and be maintained over the RORI period.

The ENA submission outlines examples to mechanistically update the MRP at the time of each decision throughout the RORI that align with the starting point MRP, as well as example outputs for changes to the risk free rate.[9]

Estimating fixed MRP

The AER indicates that it intends to continue to consider geometric averages along with arithmetic averages of MRP in its calculation of HER.[10] Ausgrid submits that only arithmetic averages should be considered. This is consistent with standard corporate finance practice as described in textbooks and the finance literature.[11]

Minimum risk free rate

At the AER public forum on 11 August 2021 the Consumer Reference Group (CRG) identified that negative real interest rates may be a problem, and suggested that a remedy for this could be a floor on

[8] For example, if the risk free rate at the RORI is 1.5% and at the time of a decision is 2.0%, and the offset factor is -0.5, the difference between the two risk free rates of 0.5% would be multiplied by -0.5 to give -0.25%. The MRP would be adjusted by this amount.
[9] ENA, Response to equity omnibus paper, 3 September 2021, pp 56-69.
[10] AER, Equity omnibus draft working paper, July 2021, p 24.
[11] ENA, Response to equity omnibus paper, 3 September 2021, pp 42-47.

the real risk free rate equal to expected inflation.[12] Nominal risk free rates have been very low for an extended period which has caused real risk free rates to be negative. This, along with a low equity risk premium, has resulted in exceptionally low allowed returns on equity being applied in recent AER decisions. Ausgrid believes CRG's suggestion has merit and encourages the AER to engage with stakeholders on how such a mechanism could work within the RORI. Investors tend to look at longer term averages for risk free rates and mitigating short-term anomalies would be a step in the right direction.

Equity beta

For the purpose calculating equity beta, the AER proposes to retain the current data set of nine Australian comparators, but is open to exploring whether firms that have been de-listed for a long period should be excluded.[13] The paper further proposes that the estimation period would use both long and short-term estimates but that longer term estimates would be given more weight.[14] Ausgrid agrees that longer term estimates are more statistically robust but believes that continuing to limit the comparator set for firms to only domestic comparators will not lead to the best estimate for the reasons outlined below.

Equity beta estimates can be materially affected by statistical "noise" which does not relate to the true systematic risk of the firm. For example, if a company makes an announcement that positively affects its stock price at a time of strong positive market returns, the beta estimate will rise as the price and market have moved strongly in the same direction. However, if the announcement is made at a time of strong negative market returns, the beta estimate falls because the price and market have moved strongly in the opposite direction. The beta estimate could be materially different purely due to the timing of the announcement, but this is unrelated to the true systemic risk of the firm.

The existence of this statistical noise highlights the need for the equity beta estimates to be based on a large number of observations. This can be achieved by lengthening the observation period and increasing the number of firms.

Lengthening the observation period is constrained by the need to give enough weight to more recent data that reflects current systematic risk. The AER's consultant Economic Insights suggest that in the finance sector a period of five years is generally used.[15] Brattle advised that two to five years would provide enough statistical reliability while giving sufficient weight to current financial conditions.[16] The ENA submission provides evidence that estimates up to five years are unstable and that a longer period would smooth out the variability.[17] Based on this evidence, Ausgrid's view is that the most appropriate term for beta estimates is 10 years.

We believe that obsolete comparator firms in the data set should be excluded. The relevance of these firms to rates of return that will be set up to 2031 is negligible. This leaves three live firms which may shortly become two due to recent market activity. A sample of two is an unreasonably small data set, which will exacerbate the issue of statistical noise outweighing the actual systematic risk of the firms. Ausgrid submits that the domestic comparator set is insufficient as the only data to be given weight when estimating equity beta and that international comparators are needed.

[12] CRG, AER Public Forum - Equity Omnibus – Draft Working paper - CRG Preliminary response, 11 August 2021, pp 13-14.
[13] AER, Equity omnibus draft working paper, July 2021, p 41.
[14] AER, Equity omnibus draft working paper, July 2021, p 43.
[15] Economic Insights, Methodological issues in estimating the equity beta for Australian network energy businesses, June 2021, p. vi.
[16] Brattle, A review of international approaches to regulated rates of return, June 2020, p 61 (paragraph 232).
[17] ENA, Response to equity omnibus paper, 3 September 2021, pp 76-85.

The AER suggests that it does not think it is appropriate to use international comparators in the data set.[18] One of the key reasons is that they operate in a different environment with differences in regulatory frameworks and domestic economies. We are not convinced these reasons would cause a material, long term difference in systemic risk. The regulatory frameworks generally attempt to achieve the same outcomes and are based on the same economic theory. We note that the QCA has determined that international firms would generally have a similar risk profile.[19] We are not suggesting that the AER rely solely on international data, but to give it some weight. The ENA submission suggests in detail how to combine the relevant evidence.[20]

In summary:

- 10 years of data should be used for beta estimates;
- De-listed domestic firms should be excluded; and
- To make up for the small sample size, international comparators should be used.

Cross checks

Ausgrid believes cross-checks are an important feature of the regulatory process. This is particularly important when setting an inherently imprecise variable such as the return on equity. Being an unobservable estimate, at each step of setting the return on equity the AER must use judgement. Unlike the return on debt, it cannot rely on objective, observable point estimates.

Cross checks should not be used deterministically to set any equity parameter. Rather, once all evidence has been evaluated and judgement used to select an estimate from a range of data, that estimate should be compared to the pre-defined comparators. If the estimate is found to be materially different from, or outside of the range of, those comparators, the AER would re-assess where it has made judgements and reconsider that judgement. There would not be a mechanistic adjustment, any changes would be dependent on the AER's judgement in line with the whole return on equity estimation process.

While the appropriate action would be at the discretion of the AER, we do not consider that it would be appropriate for the AER to explain away material differences between its own estimate and the range of comparators. If there is a clear disconnect between the range of cross-checks and the AER estimate, we would expect some adjustment to be made to the estimate.

Ausgrid believes that the most relevant cross checks are:

- allowances of comparable regulated firms in comparable jurisdictions; and
- rates of return used in independent valuation reports for similar firms.

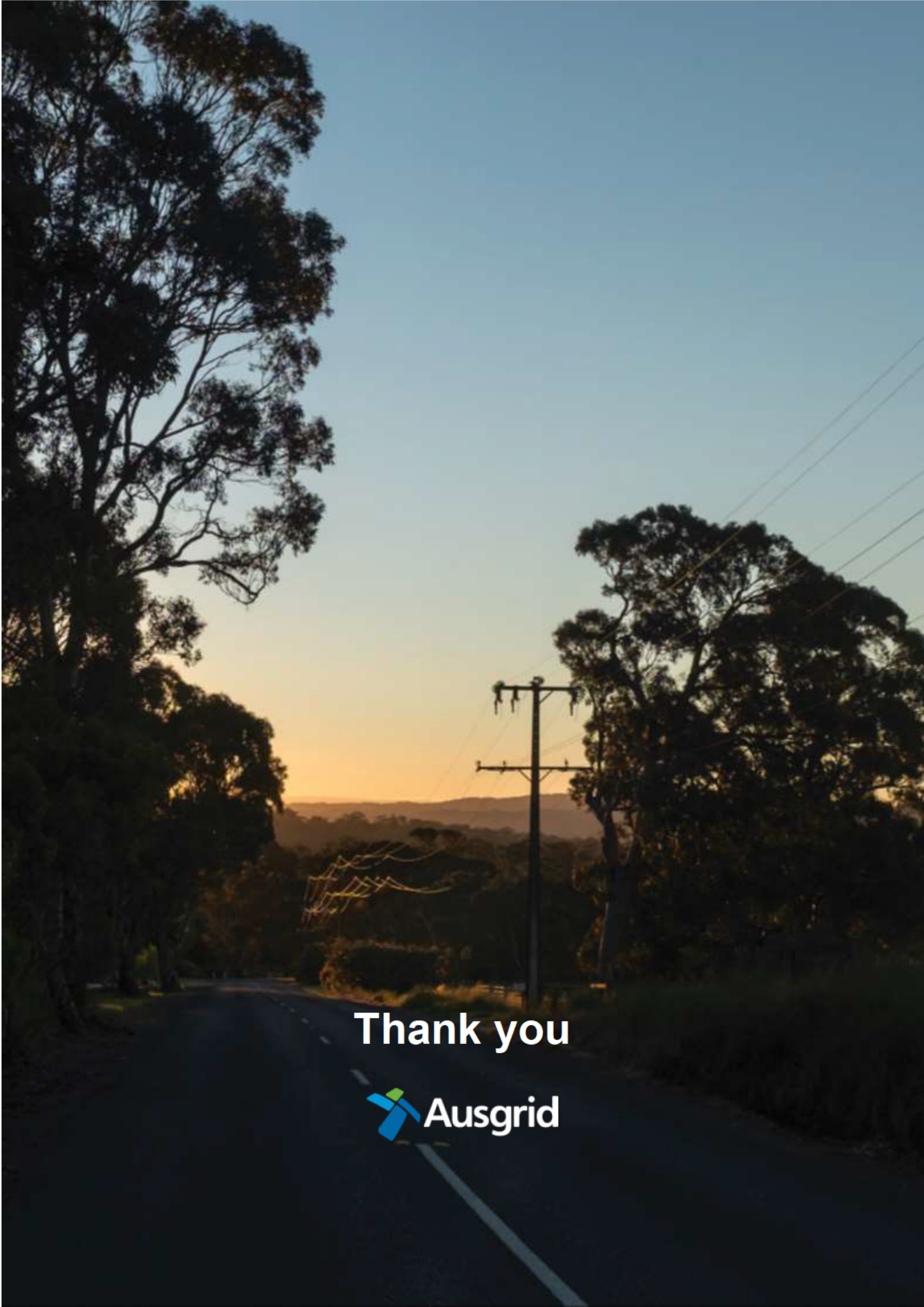
When applying cross checks it is important to ensure a like-for-like comparison is made. For example, when comparing equity betas it is important to ensure they have been re-levered to the same level of gearing, and ensuring the MRP is set on the same basis i.e. added to an unadjusted risk free rate.

Averaging period

Ausgrid agrees that averaging period flexibility should be maintained; we do not see any reason to depart from this approach.

[18] AER, Equity omnibus draft working paper, July 2021, p 41.
[19] QCA, June 2021, Rate of return review, p 63.
[20] ENA, Response to equity omnibus paper, 3 September 2021, pp 93-94.

We do not oppose changing the nomination window to start no earlier than 8 months and finish no later than 4 months prior to the regulatory period. This will provide more time to finalise the rate of return for each determination.


Thank you
Ausgrid