Major Energy Users Inc.

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[redacted]
General Manager, Networks Finance and Reporting
Australian Energy Regulator
GPO Box 520
Melbourne Vic 3001

Sent by email: [redacted]

Rate of Return
Term of the Rate of Return
Cashflows in a low interest rate environment
Draft Working Papers

Major Energy Users Inc (MEU) is pleased to provide its thoughts on the issues raised in the AER Draft Working Paper relating to the term of the rate of return and on the impact on cashflows when interest rates are low.

The MEU was established by very large energy using firms to represent their interests in the energy markets. With regard to all of the energy supplies they need to continue their operations and so supply to their customers, MEU members are vitally interested in four key aspects – the cost of the energy supplies, the reliability of delivery for those supplies, the quality of the delivered supplies and the long-term security for the continuation of those supplies.

Many of the MEU members, being regionally based, are heavily dependent on local staff, suppliers of hardware and services, and have an obligation to represent the views of these local suppliers. With this in mind, the members of the MEU require their views to not only represent the views of large energy users, but also those interests of smaller power and gas users, and even at the residences used by their workforces that live in the regions where the members operate.

It is on this basis the MEU and its regional affiliates have been advocating in the interests of energy consumers for over 20 years and it has a high recognition as providing informed comment on energy issues from a consumer viewpoint with various regulators (ACCC, AEMO, AEMC, AER and regional regulators) and with governments.

Other than a clear explanation as to why the working paper considers a change to the term for setting equity might be appropriate, overall, the MEU considers that the AER Draft Working Paper outlines well the issues related to assessing the terms for assessing the key elements (equity, debt and inflation) of the cost of capital. The MEU also appreciates that the working paper reflects a view on the term for assessing the return on equity that the MEU and some others have considered appropriate for many years.

The draft working paper on rate of return and cashflows in a low interest rate environment also provides a view that the cashflows that networks receive should be adequate and that a financeability test as part of the setting of the allowed rate of return process is not necessary. This reflects the view the MEU expressed to the AEMC about a recent rule change proposal by TransGrid and ElectraNet.

1. The history of the 10-year horizon for the rate of return

The working paper posits that a change in emphasis is needed in assessing the term for the key elements of the rate of return but, because the term for setting inflation has been decided in a previous decision by the AER and the working paper continues with the concept of a trailing average cost of debt based on the current 10-year assessment basis[1], essentially the working paper focuses on a change relating to the term for assessing the risk free rate in the development of the return on equity.

The MEU points out that as far back as the first discussion on the rate of return for network assets in 1998 ("the great rate debate of '98"), the ACCC and the state-based regulators decided that the term for the rate of return should be 10 years to better reflect the long-lived assets that the networks provide, rather than be based on the 5-year regulatory period. This decision was regularly discussed in the intervening years until the "Better Regulation" program instituted by the AER in 2013 where the AER confirmed that it would continue with a 10-year horizon for the return on equity[2] despite advice from Dr Martin Lally (Lally) that there is a strong economic argument that a 5-year horizon is more conceptually appropriate for setting the return on equity as it matched the term of the regulatory period.

This 10-year horizon decision was reinforced in the AER decision for the return on equity in the development in 2018 of the first rate of return instrument (RoRI). In its decision in 2018, the AER provided little argument against continuing with the 10-year term approach used by it, the ACCC and state-based regulators, even though the issue of a 5-year horizon had been raised with the AER several times over the years, but specifically by the MEU and the 2017 consumer reference group (2017 CRG) as part of the 2018 RoRI process.

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[1] Although there is an inkling in the working paper that the term horizon for debt might be adjusted to reflect a term based on the term for efficient borrowings by networks

[2] In contrast, at the same time the Economic Regulation Authority decided to use a 5-year horizon for the rate of return calculation.

The MEU points out that over the years it has suggested that the AER should consider moving to a 5-year horizon with the AER assessing that the more compelling reasons for retaining the 10-year horizon being regulatory consistency, and that it considered there was no strong argument for making a change.

While the MEU continues to be supportive of moving to a 5-year horizon, the MEU is very concerned that the AER has provided little supportive reasoning for its apparent change to a 5-year horizon especially recognising that the academic analysis and regulatory precedent has remained effectively unchanged since the AER 2018 RoRI decision, raising the question as to why the AER might now be considering a 5-year horizon is more appropriate for network regulation than a 10-year horizon.

In its draft working paper, the AER posits (page 32) the change is:

> "…based on an evolution of thinking and the current evidence available to us…"

yet there is no additional academic reasoning identified by the AER subsequent to the 2013 decision to support any change, other than some regulators might use a 5-year horizon[3]. However, the MEU does note that the AER has sought and received further advice from Lally (2021) that does further develop the concepts that Lally provided earlier to the AER and which latter advice was used in the discussion of the choice of term in the draft working paper.

Appendix D of the AER Better Regulation explanatory draft rate of return guideline provides the reasoning behind the AER decision to retain the 10-year commonwealth government security (CGS) as the risk-free rate for the return on equity[4] (and other elements) and develops the arguments for and against using a 5-year horizon for the return on equity but concludes (page 184):

> "While we note that there are compelling arguments both for a five-year term and a 10-year term, on balance, we propose to maintain a 10 year term."

Other than the discussion whether a 10-year CGS or a 5-year CGS better reflects the NPV=0 concept, the AER 2018 RoRI posits a number of reasons for continuing with the 10-year horizon.

1. 10-year bonds reflect better the long life of the assets
2. 85% of participants use 10-year bonds as the Australian risk-free rate.
3. 12 practioners and 2 independent experts preferred to use 10-year horizons for infrastructure assets with a 5-year regulatory cycle.
4. The MRP would have to be adjusted.
5. The materiality is modest.

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[3] The MEU notes that the AER had previously decided to retain its 10-year horizon even though some other regulators used a 5-year horizon.

[4] The MEU notes that the explanatory document for the final decision merely states that the AER will use a 10-year CGS does not address the term of the

6. 10-year bonds might be more stable than 5-year bonds.

The MEU concludes that none of these arguments provided a sound reason for not implementing what might provide a better theoretical basis for the term of the risk-free rate used for setting the rate of return on equity. The 2017 CRG suggested that the 5-year term was more appropriate, and it is noted that the 2017 CRG suggestion reflects the view provided by Lally in the 2013 Better Regulation program, and again in his April 2021 recommendation to the AER, where his views used in the Better Regulation process are further developed.

Essentially, the MEU considers that the AER 2013 and 2018 decisions to retain the 10-year CGS as the basis for the return on equity lacked sufficient theoretical basis, and that AER had erred in not making a change then.

2. Formal responses to the AER on using a 5-year CGS approach

In the development of the draft guideline for rate of return under the Better Regulation program Lally provided a theoretical argument for moving to a 5-year CGS as the risk-free rate for a regulatory period which has 5 years.

In its response to the AER Issues Paper on the rate of return in the Better Regulation program the MEU commented (page 16)

> "The MEU sees that relating the forecast rate of return to the duration of the regulatory period is consistent as the costs of debt and equity are reviewed (and changed to reflect the new market conditions) for the next regulatory period. The practice of setting a rate of return based on a 10-year forecast for a five year duration is not consistent."

The 2017 consumer reference group (2017 CRG) provided a view to the AER draft decision in its response to the AER draft decision that 5-year commonwealth government securities (CGS) was an appropriate (page xv)

> "The AER has set the risk free rate based on 10 year CGS but provides no reasoning, other than potentially having a lower volatility than 5 year terms. The CRG considers that the AER's arguments about the PTRM used to support using arithmetic averages of excess returns to estimate the MRP would suggest the use of 5 year CGS, i.e. the same term as the regulatory period."

Further on page 39, the 2017 CRG observed:

> "The benefit of using the 5 year bond rate is that it reflects the 5 year regulatory period over which the return on equity is compounded before it is reset at the start of the next regulatory period. As the ERA stated in its rate of return review in 2013, it considers there is more logic to setting the return on equity using a 5 year bond rate

> as this reflects the regulatory period. In contrast, the use of the 10 year bond rate to set the return on equity has no logic to support its use other than perhaps convention. The CRG therefore stands by its initial submission that the risk free rate should be set with reference to five year Commonwealth bonds rather than ten year bonds."

In its final decision on the 2018 rate of return instrument on the term for the risk-free rate, the AER states (page 127)

> There are two opposing principles considered below that guide how we have decided the appropriate term for the risk free rate. They are whether:
> - a term that reflects the long-lived nature of the underlying assets is more appropriate, or
> - whether to a term that is consistent with how investors would value an investment in a government bond is more appropriate.

The AER added in its commentary the 2017 CRG view that 5-year CGS was more appropriate because (page 129):

> "The benefit of using the 5 year bond rate is that it reflects the 5 year regulatory period over which the return on equity is compounded before it is reset at the start of the next regulatory period... In contrast, the use of the 10 year bond rate to set the return on equity has no logic to support its use other than perhaps convention."

The AER effectively rejected the 2017 CRG argument for the 2018 RoRI on the basis that the issues had been addressed (and rejected) in development of the rate of return guideline in the 2013 Better Regulation program.

The AER in its draft working paper now seems to consider that Lally and the 2017 CRG could be correct and the 5-year CGS should be used as the risk-free rate. The MEU supports this change.

The MEU notes the AER observation in the 2018 RoRI that it still considered Lally's earlier advice remained "reasonable" but that it was based on an assumption about the notion of full cash recovery at the end of the regulatory period. This introduced a risk highlighted by the ENA against using a shorter term that (page 130) that:

> "…investors are unlikely to evaluate regulated assets with reference to a five year bond because – unlike the case of the bond – the residual value at the end of each five year period is inherently risky. This is because the residual value is not returned in cash, but rather comprises a 'value' whose recovery remains at risk from future regulatory decisions and changes in the market (both technological changes and changes to customer preferences)."

Reflecting this concern (amongst others), the AER retained using the 10-year CGS as the risk-free rate.

In contrast to the MEU and 2017 CRG view, at the recent forum on this topic there were a number of supporters for retaining the 10-year CGS as the risk-free rate (RFR), including investors in networks and the gas and electricity networks themselves.

The MEU notes that the 2021 CRG seems to support the retention of the 10-year CGS as the risk-free rate on the basis that as there is no compelling reason to change, including no expressed expert review implying a need for change, or any evidence of under- or over-investment in the networks or harm to consumers. Specifically, the 2021 CRG considers there needs to be a high bar for any change as consumers value stability. Despite this, the 2021 CRG implicitly observed that a change to using 5-year CGS in lieu of 10-year CGS would be "welcomed".

The MEU notes that the 2021 CRG might support a move to a 5-year CGS if the AER provided a more cogent argument for the change. What does not seem to have been addressed by the 2021 CRG is there is a change from the advice provided in the past in that Lally (2021) has further developed his arguments for the term of the risk-free rate should match the term of the regulatory period.

3. A conceptual view for the term of the risk-free rate

Despite agreeing with the working paper on the view that there should be a move to using a 5-year CGS as the risk free rate, the MEU considers that the AER must explain better why its thinking has changed (other than an "evolution of thinking"), in order to substantiate the need for change, especially noting that previous AER assessments discounted the earlier advice by Lally, 2017 CRG and others (including the MEU). The MEU considers that Lally (2021) provides a more cogent argument to support the view that there should be a change.

The MEU considers that the 5-year term for calculating the return in equity is more logical than using data based on a 10-year horizon. While it is accepted that the assets the networks provide have up to 50-60 years of life, because the return on equity is reset each 5 years, notionally the investment made by the networks is made for a 5-year period, ie the networks set their investment profile as if they invested at the start of the regulatory period and assess the return on the investment at the conclusion of the period. At this point, the return on equity is notionally reset for another 5-year period[5].

What is effectively overlooked is that the National Electricity and Gas Rules for regulated investments provides a high degree of certainty that any investment made will receive both a full return of and a return on any network investment made. Many of the "expert" contributors noted by the AER in its working paper (and at other times in debates over the cost of capital) accept the premise of NPV=0 requires certainty

[5] This is much the same argument that was propounded by Lally in the rate of return guideline element of the 2013 Better Regulation program but rejected by the AER then and again with the 2018 rate of return instrument.

that the value of the assets at the end of the period are known and that this value will be used at the start of the next regulatory period. The MEU points out that the value at the end of the period ***is*** known as the rules explicitly deliver this outcome subject only to inflation and depreciation being different to those forecast (both of which are adjusted ex post) and any additions and deletions made by the networks are fully known by the networks when they occur, and which are also adjusted ex post.

The MEU notes the arguments provided that the 10-year CGS better reflects the long-lived nature of the network assets. The MEU sees that whilst a 10-year CGS is closer in term to the life expectancy of the network assets than a 5-year CGS term, the assets themselves have a life between 5-10 times more than both of the two CGS terms under consideration[6]. Despite this, the networks still expect that even using a 10-year CGS, the return on equity to be updated to reflect current conditions at the next reset. A logical conclusion is that if a 10-year CGS was deemed to be the risk-free rate, then perhaps the return on equity set on the basis of a 10-year CGS should apply for two consecutive regulatory periods as this better reflects the value of the 10-year CGS and meets the NPV=0 criterion.

The MEU points to the inconsistency in the ENA observation that there is risk in reducing the term for the risk free rate to 5-year CGS because the residual value of the assets at the end of the 5-year regulatory period might not be retained over time due to the potential of future regulatory decisions and changes in the market. The MEU points out that this risk (if there is any) is appropriately accommodated within the market risk premium (MRP) which reflects that all investments made by all firms, are subject to these (and more) risks in the competitive market. In practice, the risk of the asset mismatch at the end of the period is still present even if a 10-year CGS were used as the risk-free rate.

The key issues of concern identified in section 1 above and elsewhere for retaining a 10 year horizon were:

- That there should be a common term for equity, debt and inflation. In its decisions to use a trailing average cost of debt, and a 5-year assessment of inflation, the AER clearly demonstrates that this apparent need for a common term has disappeared.
- That the MRP might change if 5-year CGS were used. The MEU accepts that the MRP would need to be adjusted. This is not a reason not to implement a more economically correct term for the risk-free rate.
- More practioners use the 10-year CGS. The MEU accepts that this might be the case, but as the introduction of the 5-year CGS occurred subsequent to the 10-year CGS, this fact might be more of a hangover from past practices than having an economic basis. Further, the 10-year CGS is used

[6] The MEU notes there is now a 30 year CGS which is even closer to the expected life of the asset, but setting the return on equity for 30 years from now based on the 30 year CGS is unlikely to satisfy the networks due to the risk that the return on equity needed at some point in time in the future, will be much higher.

for more than regulatory processes so its use in the regulatory space might be more from convenience than having an economic basis.

- About stability of the outcome. While the MEU supports there being stability in the processes, the processes themselves must be robust and soundly based on economic theory. Further, the networks themselves have been prepared in the past to accept more volatility if the outturn delivered a greater return to them. With the move to update the cost of debt annually, the MEU does not see that the issue of stability for the return on equity continues to carry much weight when there is so much annual variation already occurring in the overall rate of return.

4. The ex ante approach to setting MRP and equity beta

The AER points to the need to use forward looking assessments for MRP and equity beta as this is consistent with the NPV=0 concept embedded in the decision to move to 5-year CGS as the risk-free rate. Unfortunately, the tools are yet to be developed that would provide sufficient certainty as to what the values for MRP and equity beta might be in the ensuing years until the next reset.

One way of achieving this outcome would be for an ex ante value to be implemented and then have an ex post adjustment but even this approach would be subject to significant assumptions. Further, making ex post adjustments would lead to outcomes dependent of the vagaries of the market which do not reflect the recognition that these investments have a high degree of certainty of return and an asset life of 50-60 years.

The MEU considers that values of MRP and equity beta in more recent times are more likely to be reflective of the future movements in these parameters and by assessing these over a reasonable past period will provide greater stability of the return needed for assets which have a 50-60 year life. The MEU does not support the view that values for these parameters over a short forward-looking period, will provide a reflection of the need of a return over the life of the assets. In this regard, the MEU members have highlighted to the MEU that when they make investments, they do not use tools based on short term vagaries of the market but use measures that reflect the expected variations that the market sees over the longer term. This is important to them because they are not just subject to the movements in the cost of money but also of many other risks they face that the networks do not.

5. Term of debt

The NPV=0 concept requires the cost of debt to reflect the most efficient approach to debt provision. This effectively means that the term of efficient debt portfolio will vary over time. In times of low cost for debt, the efficient provider would tend to seek longer term debt and at times of higher costs for debt, the efficient provider would tend to seek shorter term debt. This means that the average term for an efficient portfolio of debt will vary over time.

The MEU agrees that the term of debt should not be arbitrarily tied to any fixed timeframe but be allowed to "float" reflecting what the market is doing, assuming that the market (on average) will deliver the most efficient outcome.

6. Financeability and cashflow metrics

The MEU notes that the AER is also interested in whether it should introduce, as part of its assessment of the allowed revenue, a suite of financing metrics to ensure that the allowed rate of return provides sufficient cover to ensure the networks can obtain adequate debt provision. This is the issue that TransGrid raised as part of its stated need for increased cashflow for Project EnergyConnect and precipitated a rule change proposal for ISP projects that ISP projects should have their cashflow improved in the early years through adjusting the way depreciation is assessed and that there should be a move to a depreciated actual cost of assets coupled to a nominal rate of return.

The MEU notes that in past years, the ACCC used to assess cashflow metrics as part of its regulatory resets to test the outcome of their setting of the rate of return, but this practice was discontinued presumably as certainty about the outcome of the cost of capital process increased. Now that the rules impose a RoRI process which is independent of what occurs at each reset, to carry out a financing metrics process at each reset becomes a pointless exercise as the RoRI does not allow the cost of capital to be varied at a reset.

The MEU provided extensive assessments[7] of the proposed rule change initiated by TransGrid and ElectraNet which highlighted an apparent need for financeability to be assessed. The MEU made a number of key observations as part of its response to the AEMC, including:

- The TransGrid and ElectraNet assessments of "free cashflow" excluded the impact of the return of capital included in the building block used to develop the allowed revenue. The MEU points out that although depreciation is a "non-cash" item in standard accounting, it is a cost that consumers pay to the networks as part of the allowed revenue. This makes the effect of depreciation in the building block approach, a cash item which can then be used as part of the free cashflow calculation metric.
- The apparent need identified by TransGrid and ElectraNet looked at only one financeability measure, rather than the suite of measures used by credit rating agencies.
- The process was not tested by competition. This aspect still remains that, because the networks have exclusivity for building networks assets in their

[7] Available at https://www.aemc.gov.au/sites/default/files/documents/rule_change_submission_-_erc0320_-_major_energy_users_-_20201203.pdf and https://www.aemc.gov.au/sites/default/files/documents/rule_change_submission_-_erc0320_erc0322_-_major_energy_users_-_20210318.pdf

defined regions, there is no test as to whether the networks are sufficiently negatively impacted by the current low interest environment to warrant the concept that the RoRI should be validated by reference to some financeability measure.

What is not addressed is that, if the current low interest environment is impacting the networks negatively, the impact of a high interest rate environment would positively impact the networks, presumably to the detriment of consumers. The MEU notes that the networks have not considered periods of higher interest rates were detrimental to them, implying that when interest rates are higher, networks might be over-compensated. If this is the case, then the MEU considers that what is currently being experienced is temporary only and there should not be a need to change the current practices to address a short-term issue.

Additionally, the RoRI applies to the "pure play energy network" of which there are now none on the NEM, and to assess the financing metrics for the benchmark efficient entity does not deliver a comparable outcome for the actual firms providing network services.

7. Summary

The MEU considers that there is sufficient economic rationale for the AER to move to implementing 5-year CGS as the basis for setting the risk-free rate for use in the setting of the rate of return on equity.

The term of debt should reflect the most efficient period identified from the market.

The MEU agrees with the AER that a financeability test is not required or applicable as part of the setting of the RoRI.

The MEU is happy to discuss the issues further with you if needed or if you feel that any expansion on the above comments is necessary. If so, please contact the undersigned at [redacted] or [redacted].

Yours faithfully

[redacted]

[redacted]
Public Officer