

25 September 2018

Mr Warwick Anderson
General Manager
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001

Via email: [REDACTED]

Dear Mr Anderson,

The Network Shareholder Group (**NSG**) are major investors and funds that are the custodians of the retirement and general savings for many millions of individual Australians. We have collectively invested over \$12bn into Australian electricity transmission and distribution network service providers (**NSPs**) serving more than 9 million people across multiple states.

As providers of long-term capital to support reliable and affordable energy network services to customers, we are committed to system stability, reliability and minimising costs to consumers. To achieve this, we require a regulatory regime that provides confidence to invest efficiently through stability, predictability and transparency of process and outcomes across multiple regulatory periods.

Response to the Australian Energy Regulator's (AER's) draft Rate of Return Guideline (RORG)

The NSG does not consider that the draft RORG achieves the National Electricity and Gas Objectives (**national energy objectives**) or complies with the Revenue and Pricing Principles (**RPPs**) and therefore cannot be supported in its current form. Further detail of the NSG's assessment of the draft RORG is contained in the attachment to this letter.

The significant reduction in allowed returns outlined in the draft RORG since the TransGrid determination only a few months ago in May 2018, is contrary to the updated analysis, prevailing market conditions and appears driven by a narrow assessment of inputs rather than overall outcomes to deliver lower short-term prices to consumers.

However, if applied, the significant reduction will likely increase costs to customers over time as investment stalls and uncertainty increases required risk premiums. The AER has a responsibility to have regard to these clear consequences in properly assessing the overall outcome of applying its draft 2018 RORG against the requirements of the Law.

In our view, the draft RORG:

1. Does not reflect a balanced and objective assessment of the information, evidence and views of stakeholders, which is ultimately against long-term interests of consumers, owners and investors as required by the Law;
2. Implies that the AER's prior decisions on rate of return were materially too high without any proper justification (or debate in the concurrent evidence sessions);
3. Fails to address prevailing market evidence that supports a higher (rather than lower) rate of return;
4. Disregards consensus views of experts arising from the AER's concurrent evidence sessions and the Expert Joint Report;
5. Departs from its publicly expressed position that the review would be incremental by selectively changing the approach to the RORG in a manner that results in a material reduction in regulated returns contrary to market evidence; and

6. Erodes investor confidence in the validity of regulatory processes and predictability of outcomes, particularly in an environment where there is no Limited Merits Review (LMR) and where access to Judicial Review for rate of return matters is effectively no longer available.

The process undertaken by the AER has failed to instil confidence in the process or outcome

The process undertaken by the AER was designed to increase confidence of stakeholders in the RORG outcomes – a critical requirement where there is no longer independent third-party review. In such an environment, we would expect the regulator to embrace the highest possible standards to build trust, protect its independence and demonstrate compliance with the Law.

The lack of justification for how the substantial reduction in allowed returns achieves the national energy objectives and the RPPs, the disregard of agreed positions of experts and the narrow focus of the Independent Panel review process on availability (rather than merit) of reasons, has eroded investors' trust.

We expected a critical and objective assessment of evidence and submissions to establish agreed facts and test positions based on their merits. Instead we observe that the process has delivered asymmetric treatment of information and exercise of judgement that may put investment in energy infrastructure and the long-term interests of consumers at risk.

Indeed, given the predominance of evidence and market estimates that support an increase in the regulated rate of return and the AER's decision to act to the contrary, it is difficult to identify any information or evidence that could persuade the AER that the required return should ever increase. This instils a sense of futility in participating in the AER's processes.

This is particularly concerning in a recurring process like the RORG review, where investors and consumers are not just impacted in the short-term by decisions made today, but by the implications of those decisions well into the future. Erosion of confidence increases risk and uncertainty for subsequent reviews that will take place.

The draft RORG stipulates that the rate of return is too high without proper justification

A necessary implication of the significant reduction in returns proposed by the draft RORG is that the current rate of return determined by the AER as recently as May 2018 in TransGrid's decision is now too high – this appears to have been accepted by the AER without evidence or justification. The available evidence instead suggests:

- Equity risk premiums (ERPs) available for regulated energy networks in other jurisdictions with similar frameworks and risk profiles are significantly higher (more than 300-basis points)¹ than the 360-basis points adopted in the AER's draft RORG;
- Sovereign and regulatory risk has increased as a result of repeated and significant interventions by government, a deterioration in the governance underpinning energy and regulatory policy decisions and the effective removal of appeal rights on rate of return matters; and
- All but one expert in the AER's concurrent evidence sessions agreed that the risk has not reduced since the 2013 RORG.

The draft RORG has resulted in a 95-basis point (20%) reduction in equity returns eliminating approximately \$350 million of revenue per annum (before any impact of gamma and lower debt premium is accounted for) for NSPs facing the same regulatory and market environment and is plainly incongruous with the recent TransGrid determination.

¹ John Earwaker, The AER's Draft WACC Guidelines: An International Perspective, August 2018.

As already highlighted, investors must have confidence that the AER will objectively assess all information for factual correctness and determine the merits of the arguments put to it. For example, the assertions that over-investment, higher regulated asset base (**RAB**) multiples, and higher prices have all been driven by a rate of return that is too high is not factually correct:

- Since the 2013 RORG, investment has reduced significantly and NSPs are systematically underspending forecast allowances, indicating that the perceived incentive for investors to overinvest under the current RORG doesn't exist in practice;
- Higher RAB multiples are driven by a range of factors, most importantly by investor's long-term views of the role of networks and their forecast growth opportunities in the regulated and unregulated sectors, as well as from the financial incentives available for delivering lower costs and better services which are in the long term interests of customers; and
- Since the 2013 RORG, network prices have fallen and will continue to do so; distribution charges have fallen by between 3% and 5% annually in real terms with further reductions foreshadowed in determinations, proposals and draft plans, so higher retail prices have been driven by other elements of the energy supply chain and not network charges.

The draft RORG does not address prevailing market conditions

In an environment where the RORG cannot be re-opened, forward-looking risks must be taken in to account, however, the draft RORG fails to do so:

- there is no adjustment for forecast bias of the SLCAPM;
- the equity beta estimate ignores more recent changes in systematic risk; and
- the market risk premium estimate no longer incorporates any forward- looking estimates.

In addition, the AER has not considered, as we believe it should have, the potential impact of other current review processes on the rate of return such as the AER's review of the regulatory treatment of tax which has the potential to impact further on the assumptions of the Benchmark Efficient Entity (**BEE**) and the value of imputation credits.

Erosion of investor confidence and incentive to invest will drive up electricity prices

The significant reduction in returns proposed in the draft RORG will necessarily impact on investment decisions and incentives in a manner that drives up prices and reduces service levels for customers and is therefore not in the long-term interests of customers. The cost to customers could be significant, for example:

- **Increased reliability and security risk** – more than \$4bn a year is required to invest in networks to keep “the lights on”. Operation of network businesses and their associated investments are not riskless, and in the absence of sufficient returns on investment, the risk associated with future supplies is likely to increase irrespective of the networks' compliance with the licence conditions;
- **Higher bundled energy prices** – insufficient returns will put at risk critical and innovative investments that support a transition to a lower cost energy system, a transition that is being demanded by consumers. For example, the Australian Energy Market Operator's (**AEMO's**) Integrated System Plan identifies that in the absence of significant transmission investment, customers could miss out on more than \$1 billion in potential savings² and a failure to leverage new technology and innovative approaches will delay benefits to end-users from behind the meter investments and dynamic matching of demand and supply; and
- **Value of lost load** - a 5% increase in the risk of additional unserved energy to customers in NSW could result in lower reliability to customers, which, if priced appropriately, would exceed the short-term reduction in retail prices that might be received from a lower rate of return.

² AEMO, Integrated System Plan, July 2018, p.6.

The AER does not appear to have assessed any of these impacts.

Moreover, as equity investors in Australian regulated networks have access to global investments, setting returns at the bottom end of international comparators will likely starve the networks of incremental investment.

What is required for the Final RORG?

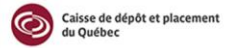
We take a long-term view of our investments and we should not be alone in safeguarding the long-term interests of energy consumers in terms of price, reliability and security of supply of network services. The AER must properly consider these longer-term impacts as a matter of law and to drive lower sustainable prices for consumers as well as maintaining a supportive investment environment.³

Prior to settling the final RORG we consider that the AER must:

1. Demonstrate that it has applied a sufficiently high evidentiary and process standards to appropriately balance the interests of all stakeholders in both its process and decision to maintain the confidence of stakeholders in the absence of LMR and Judicial Review, including where positions have moved between the Issues Paper, draft RORG and final RORG;
2. Assess and measure the long-term impacts on prices, services, incentives and investment of the direction and size of the change in the rate of return and provide reasons why these impacts achieve national energy objectives and the requirements of the RPPs;
3. Provide reasons why the AER is satisfied that a significant reduction in the ERP and increase in gamma is appropriate in the absence of significant new developments in finance theory and available academic literature, increases in the SLCAPM parameter estimates from empirical analysis, increasing risk and evidence of lower capital investment and RAB growth since the 2013 reduction in the ERP;
4. Provide a critical assessment of information provided through the concurrent evidence sessions, stakeholder submissions and agreed positions captured in the Expert Report and develop a common evidence base that seeks to eliminate factual errors and evidentiary inconsistencies contained in several stakeholder submissions; and
5. Demonstrate that the regulated rate of return and value of imputation credits do not result in a regulated return that is too low or below the efficient cost of capital.

We provide further supporting detail on the concerns outlined in this letter in the attachment. We look forward to further engagement with AER staff and the AER Board to ensure that future efficient and sustainable investment in networks required to support a low cost, low emission, reliable and flexible energy system is supported under the RORG.

³ See the NGO, NEO and Revenue and Pricing Principles in the National Gas Law and National Electricity Law.

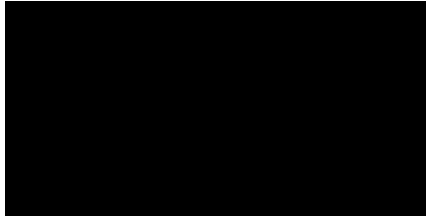


Please contact Sally McMahon via email to [REDACTED] or by phone on [REDACTED] with any questions or follow up.

Yours sincerely,



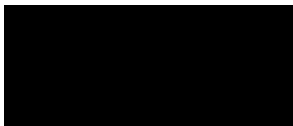
Rick Francis
Managing Director & CEO
Spark Infrastructure



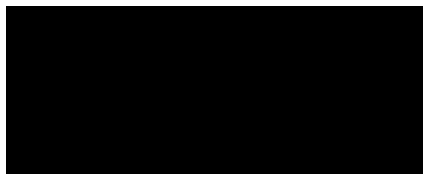
Steven Fitzgerald
Head of Asset Management
HRL Morrison



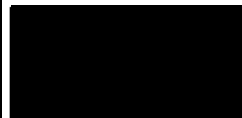
Michael Cummings
Global Co-Head of Asset Management
AMP Capital



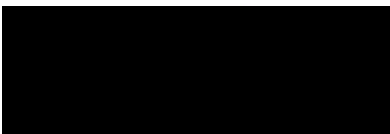
Nik Kemp
Head of Infrastructure
AustralianSuper



Michael Hanna
Head of Infrastructure – Australia
IFM Investors



Francis Kwok
Co-Head of Asia-Pacific
Macquarie Infrastructure and Real Assets



Jean-Etienne Leroux
Regional Director, Infrastructure Investments – Australia & New Zealand, CDPQ

ATTACHMENT TO THE NETWORK SHAREHOLDER GROUP'S LETTER DATED 25 SEPTEMBER 2018 ON THE AUSTRALIAN ENERGY REGULATOR'S DRAFT RATE OF RETURN GUIDELINE

1. Introduction

We cannot support the draft Rate of Return Guideline (**RORG**), on the basis that it does not meet, and has not been appropriately assessed against, the National Gas Objective (**NGO**), the National Electricity Objective (**NEO**)⁴ and the Revenue and Pricing Principles (**RPPs**)⁵ as required by the Law. Any change to allowed returns must **better** achieve the NEO, NGO and comply with the RPPs than the 2013 RORG, which we argue is not the case. The AER must:

- **NEO and NGO:** must ensure that its decisions promote efficient investment in, and efficient operation and use of the relevant electricity or gas services, for the long-term interests of consumers with respect to the price, quality, safety, reliability and security of supply; and
- **RPPs:** provide a reasonable opportunity to recover at least the efficient costs, provide a return commensurate with the regulatory and commercial risks involved, provide effective incentives to promote economic efficiency and have regard to the economic costs and risks of the potential for under and over investment.

We agree with the Independent Panel's view that a consideration of the NEO and NGO must look beyond finance theory, and that **any use of judgement must be fully and credibly explained** by reference to the NEO and NGO:

*"A particular rate of return does not achieve the national objectives just because finance theory says it should... The Draft Guidelines will be capable of promoting the national objectives only if it wins the trust of, and induces the efficient conduct of, all those parties."*⁶

And further that:

*"...while judgement is unavoidable, it must be credible. Judgement without principle, judgement without explanation, risks being idiosyncratic, arbitrary, unpredictable and non-replicable. It undermines trust in the regulatory process. Loss of trust discourages investment. In the (AER's) Explanatory Statement, this concern arises at several key points; especially where a judgement is made, but where the explanation of the judgement is missing or insufficiently detailed."*⁷

Therefore, in order to comply with the law and give effect to the policy objectives, the Australian Energy Regulator (**AER**) must assess:

- The impact of the changes to the overall rate of return, and not simply to each individual input parameter; and
- The long-term impacts of the proposed reduction in the overall regulated rate of return on prices, quality, safety, reliability and security of supply.

In this context, the significant reduction in allowed returns proposed in the draft RORG will necessarily impact on investment decisions and incentives in a manner that drives up prices for consumers and reduces service levels, and therefore is not in the long-term interests of customers.

The consequential negative impacts of the draft RORG include an increase in required risk premium, reduced incentive to deliver the significant network investment required to reduce electricity costs as described in the Australian Energy Market Operator's (**AEMO's**) Integrated System Plan, lower incentives to deliver cost efficiencies and the reallocation of capital to other geographies.

⁴ NEL, s. 7; NGL, s. 23.

⁵ NEL, s. 7A; NGL, s. 24.

⁶ Independent Panel, Review of the Australian Energy Regulator's Rate of Return Draft Guidelines, 7 September 2018, p. 67.

⁷ Independent Panel, p. 62.

2. Available evidence suggests that the current rate of return is not too high

The significant reduction in allowed returns proposed in the draft RORG, contrary to the updated analysis and prevailing market conditions, suggests that the AER must have started from the proposition that the current rate of return was too high. No justification has been provided for such a position.

The AER appears to have significantly retreated from its position of only a few months ago that the 2013 RORG achieved the NEO and NGO.

- In its November 2017 Issues Paper, the AER did not consider the current rate of return to be too high and consequently was happy to adopt the incremental approach to the review (emphasis added):

Our view is the allowed rates of return we have set when applying the current Guideline have achieved the national electricity and gas objectives, as well as the allowed rate of return objective. We also consider our approach to determining the value of imputation credits has been consistent with the National Electricity Rules and National Gas Rules (the rules) and with achieving the national electricity and gas objectives. However, there are a number of areas of our approach that warrant review to ensure that the Guideline will continue to achieve the legislative objectives into the future.

*Given this history, we **consider this review should seek to build on the current Guideline rather than start afresh**. There are a number of aspects of the current approach that are reliant on market data and empirical analysis, and this material would clearly need to be updated. However, there are a number of aspects of the current approach that are driven by finance theory and available academic literature. **We are not aware of any significant new developments in this area that might warrant us taking a new approach.**⁸*

- The AER also adopted the current rate of return in the final determinations for ElectraNet and TransGrid in April and May 2018, respectively, despite available additional materials from a well-progressed RORG review. Since those determinations, there has been no change in prevailing market conditions that warrants, or indeed explains any reduction in allowed returns, let alone:
 - A 95-basis point reduction in Equity Risk Premium (**ERP**) which is the premium above the risk-free rate (**RFR**);
 - The consequent 45-basis point reduction in weighted average cost of capital (**WACC**); or
 - A 25% increase in the value of imputation credits.
- The 2013 RORG is not binding and the AER applied its judgement in each decision that the rate of return achieved the NEO, NGO and complied with the RPPs. We have seen no information or explanation that the returns delivered by the AER since 2013 were too high. Nor has the AER presented the information that has been relied on to form such a view.
- On the contrary, the evidence, if independently presented and objectively assessed, suggests that recent returns determined by the AER have been too low – sufficiently low to lead to a stark reduction in investment since the 2013 RORG.
- A corollary to this, the AER has provided no analysis that indicates that the proposed rate of return in the draft RORG can attract sustainable investment long-term.

Assertions that undesirable outcomes have been driven by the current rate of return being too high are factually incorrect

- Investors must have confidence that the AER will independently assess the information to be factually correct and determine the merits of the arguments put to it. For example, the assertions that over-

⁸ AER, Issues Paper, Review of the Rate of Return Guideline, October 2017, p. 8.

investment, higher regulated asset base (**RAB**) multiples, and higher prices have all been driven by a rate of return that is too high is just not factually correct:

- Investment has reduced significantly since the 2013 RORG;
 - Higher RAB multiples are driven by a range of factors, including business growth opportunities within both the regulated and unregulated areas, the financial incentives available for delivering lower costs and better services which are in the long-term interests of customers; and
 - Network prices have fallen by between 3% and 5% since 2014 and the contribution of network charges to the average household bill has also fallen between 2015-16 and 2016-17⁹, so increases in any higher retail prices have been driven by other elements of the energy supply chain. For example, wholesale electricity prices rose by 130 per cent between 2015 and 2017, and the contribution of these costs to the average household bill rose by between 36% and 80% over that same period.¹⁰¹¹
- We have reviewed the information and evidence provided by other stakeholders that may have been relied on to form a view that the current RORG is too high. We address the statements in the following table.

Table 2.1: Response to information regarding the rate of return being too high

Potential argument	Response
There has been an upward bias in WACC decisions since 2013 to encourage investment at the expense of efficient prices	<p>The 2013 RORG reduced ERPs from as high as 6% (for transmission) to 4.55% mainly as a result of reducing the equity beta to 0.7. This result is more in line with those determined by regulators in other jurisdictions including the UK, US, NZ and Europe – not significantly higher.</p> <p>The AER has consistently applied the WACC outlined in the 2013 RORG over the last 5 years and as recently as May 2018. The 2013 RORG did not lock in a value or method and was not binding. To suggest that the AER repeatedly made determinations that were ‘incorrect’ brings in to question the integrity of the AER and its decision-making processes.</p> <p>The AER has not previously indicated that it has purposely set a higher WACC to encourage investment. If this is the case, the AER should acknowledge that it adopted an ‘upward bias’ and now considers that an ‘upward bias’ is no longer required. However, if this was the case and an ‘upward bias’ was adopted to encourage investment, this has not occurred.</p> <p>Since the 2013 RORG, Network Service Providers (NSPs) have spent less than the regulatory allowance on capital expenditure, which has fallen significantly, and RAB growth has plateaued.</p>
More favourable equity and debt market conditions	<p>The AER’s rate of return on debt and equity have fallen point for point with changes in the RFR. A significant reduction in the ERP from 4.55% in 2013 to 3.6% (proposed) in 2018, due to the AER’s sole reliance on historical excess returns (HERs) to estimate the market risk premium (MRP) must reflect an assessment of the change in risk, not changes in the RFR which are factored in automatically.</p>

⁹ See Grattan Institute, Mostly working: Australia’s wholesale electricity market, July 2018, p. 8

¹⁰ See <https://grattan.edu.au/report/mostly-working/>

¹¹ See Grattan Institute, Mostly working: Australia’s wholesale electricity market, July 2018, p. 8

Potential argument	Response
RAB multiples significantly greater than one	<p>The largest RAB multiples have occurred where a publicly owned NSP has transferred to a private ownership. In this instance, private owners are likely to have significantly different financing, corporate structures, and more ambitious plans to achieve efficiencies and grow the unregulated service businesses. Further, acquisitions occurred at a time when LMR and judicial review were available and a forecast of the outcomes of open proceedings needed to be made. All of these factors are likely to drive premiums above the RAB.</p> <p>The AER sought advice from its own advisor (Darryl Biggar) on the informative properties of RAB multiples and that report suggested that RAB multiples could be misleading, are not relevant for the NSP and should, at a minimum, be properly investigated before drawing any conclusions.¹² Biggar also noted the expectation that RAB multiples would be higher than 1.0x where opportunities exist under a financial incentive mechanism.</p> <p>A RAB multiple greater than one will occur if the incentive based regulatory framework is working and regulated businesses are delivering improved efficiency over time, which is then shared with consumers.</p>
Favourable broker reports	<p>The referenced broker reports all pre-date the most recent changes to the energy regulatory framework (including the removal of LMR and significant narrowing of judicial review rights via the implementation of a binding legislative instrument).</p> <p>Further, favourable broker commentary is focused on the capacity for NSPs to deliver cost efficiencies and grow the unregulated business, neither of which are relevant to an assessment of the rate of return under the regulatory framework.</p> <p>In any event, since the release of the draft RORG, broker reports have highlighted:</p> <ul style="list-style-type: none"> • The proposed 95 basis point cut to the ERP exceeded expectations, and an increase to the value of imputation credits was a further unexpected negative; • Earnings forecasts and target prices should all be materially revised downwards (beyond pre-RORG expectations); • Reduced revenue from regulatory changes are impacting forecast credit metrics and putting current credit ratings at risk; • Regulatory change and disruptive technologies are key downside risks; and • Forward-looking regulatory risk is increasing, including the risk of changes to asset stranding rules and greater regulator discretion proposed by the ACCC.
Customers value short-term price reduction more than long-term lower price, reliability and service	<p>The AER has a responsibility under the law to properly assess the legality and eventuality of such a trade-off, including the risk and likelihood of customers actually receiving the lower prices in return for higher risk of declines in network reliability and security of supply in the long term.</p> <p>Further, as part of having regard to the long-term interests of consumers, the AER must assess whether current views by customers and representative groups incorporate the views of future customers.</p>

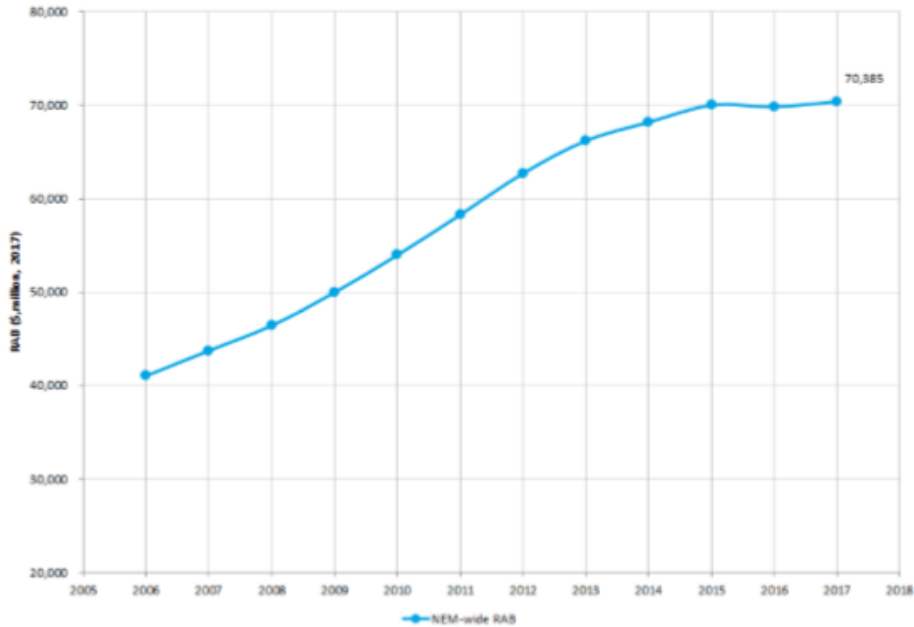
Investment in the network infrastructure is at its lowest point in over a decade

- 2013 represented a turning point in capital expenditure and RAB growth – following the release of the 2013 RORG, capital expenditure fell in response to the significant reduction in rates of return, as

¹² Biggar, Understanding the Role of RAB Multiples in Regulatory Processes, 20 February 2018.

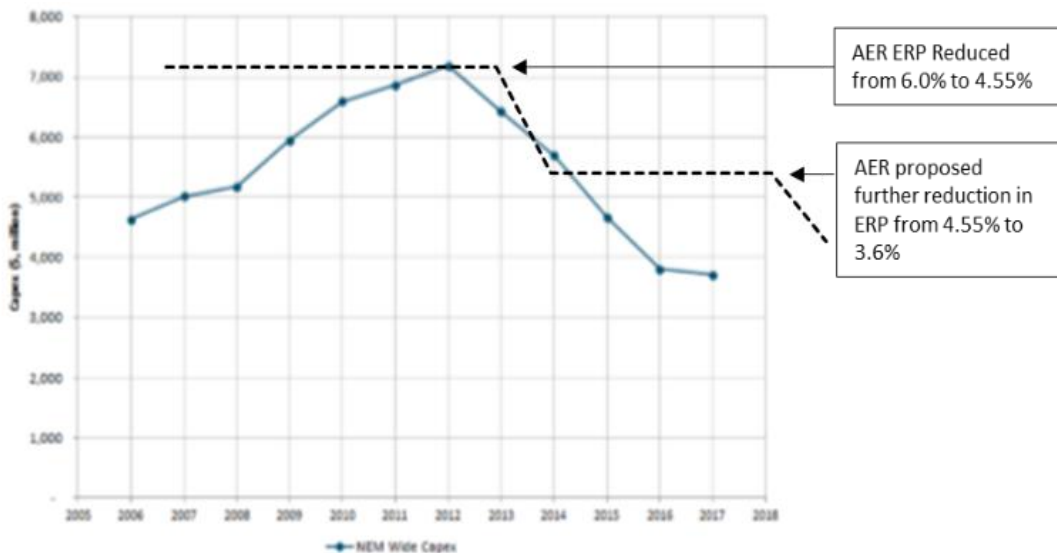
evidenced by the Australian Energy Market Commission's (**AEMC**) analysis of RAB and capital expenditure¹³ overlaid with changes in the regulated ERP in the figures below.

Figure 2.1: Combined closing Distribution NSP RAB



Source: AER
Note: values in 2017 real dollar terms.

Figure 2.2: Combined Distribution NSP Capex



Source: AER
Note: values in 2017 real dollar terms.

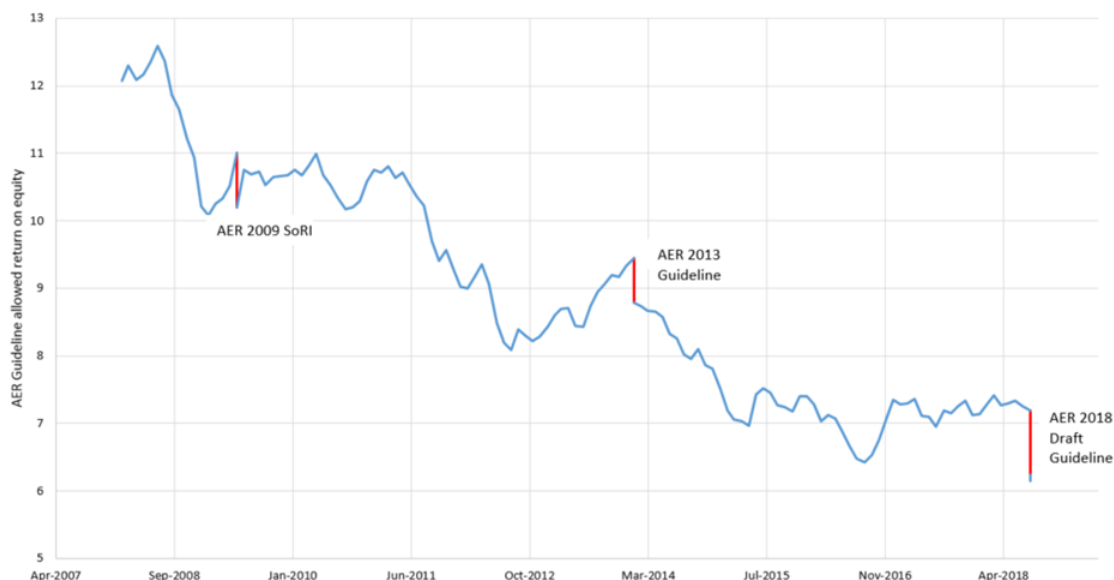
¹³ AEMC, Economic Regulatory Framework Review, Promoting efficient investment in the grid of the future, July 2018, Section 3.

- The over-investment referred to in recent reports by the Grattan Institute¹⁴ and the Australian Competition and Consumer Commission (ACCC)¹⁵ was driven by government ownership and decision-making (primarily in NSW and Queensland). Both reports acknowledge that:
 - 1) the over-investment that occurred between 2007 and 2017 was due to government decisions on reliability standards following black out events in 2004, and the roll-out of interval meters, as well as by inefficient investment decisions by government-owned NSPs;
 - 2) the majority of over-investment occurred prior to 2014; and
 - 3) any “over-investment” had not occurred under private ownership.
- Reducing the rate of return to address historical perceived over-investment will penalise good and bad performers equally reducing future incentives to outperform the regulatory settings.

Investors’ returns have decreased significantly in the last decade

- Figure 2 illustrates a sharp decline in regulated equity returns since 2007. In addition to decline in risk-free rate, the observed decrease has been driven by a 24% cut to ERP in 2013 Guideline. The proposed 21% cut to ERP in the 2018 RORG, eliminating approximately \$350m of revenue per annum for NSPs, (before any impact of gamma and lower debt risk premium is taken into account) suggests that the risk facing the investors in the sector has reduced significantly. This is contrary to the expert panel’s views that the risk has not decreased since 2013 and the available empirical evidence suggesting risk has risen (see Section 5 for further detail).

Figure 2.3: Reductions in regulated returns for energy networks in the National Electricity Market¹⁶



- The AER’s approach results in a fixed ERP that is significantly lower than any other estimate from the Wright approach, other regulators, brokers, and independent expert valuers.¹⁷
- The ERP in the draft RORG puts Australia at the bottom-end quartile globally and will be insufficient to attract capital on a risk-adjusted basis.

¹⁴ The Grattan Institute, Down to the wire: A sustainable electricity network for Australia, 25 March 2018.

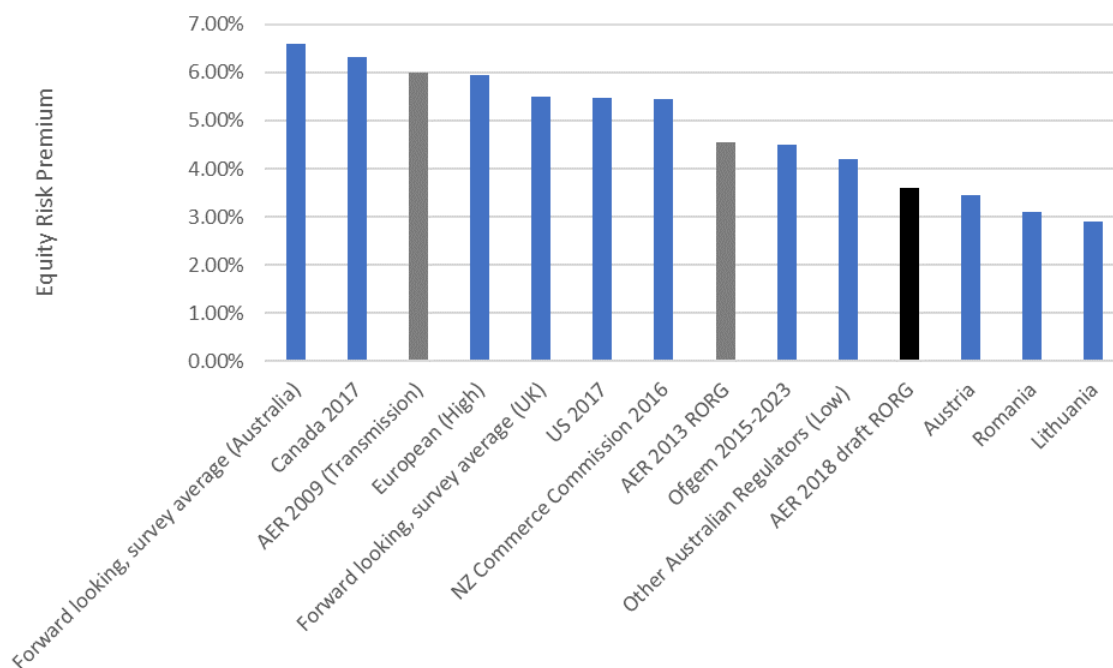
¹⁵ ACCC, Retail Electricity Pricing Inquiry, Final Report, June 2018.

¹⁶ ENA, Response to the AER’s draft Rate of Return Guideline, September 2018.

¹⁷ AER, Draft Rate of Return Guideline Explanatory Statement, July 2018, p. 183-186.

- If adopted, these returns will be about one third less than regulated returns in New Zealand, the UK and the North America and in the bottom third of regulated returns across Europe (see Figure 2.4).

Figure 2.4: The AER's proposed ERP compared with other jurisdictions¹⁸



- The AER has argued that international comparisons are invalid due to issues surrounding differences in regulatory procedures and tasks. However:
 - This is not borne out in an assessment of the comparative risks; and¹⁹
 - The majority of investors in Australian regulated networks invest globally based on risk-adjusted equity returns – so for a capital provider, international comparison matters for future deployment of capital and incremental investment.
- The regulatory risk to NSPs in the UK is lower due to access to effective judicial review which is relevant to systematic risk.
- In addition to the ERP being significantly below the regulated ERP provided for in the US, UK and New Zealand, we note that the ERP in New Zealand has remained stable at around 420 to 430 basis points, the UK has remained stable at around 450 basis points since 2005, and based on early analysis from Ofgem to support variations that might be adopted in the 2023 reviews, the ERP will increase, not decrease.²⁰
- The AER's draft RORG is an unusually aggressively low estimate of the cost of equity for a regulated company and is a departure from what has in the past been a position of consensus across comparable regulatory regimes.²¹

¹⁸ John Earwaker, The AER's Draft WACC Guidelines: An International Perspective, August 2018 and the estimates for other Australian regulators are from AER, Draft Rate of Return Guideline Explanatory Statement, July 2018, p. 182.

¹⁹ John Earwaker, p. 16.

²⁰ John Earwaker, p. 4.

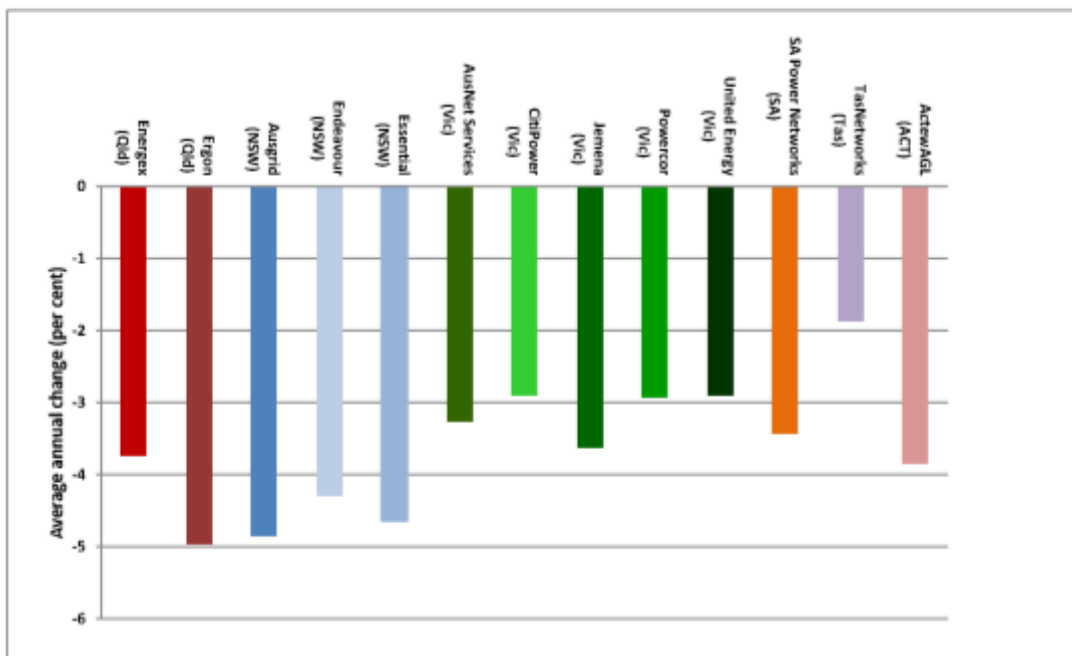
²¹ John Earwaker, p. 9 and 11.

The incentive-based regulatory framework is working; network prices have decreased and will continue to decrease

- Incentive-based regulation enables networks to benefit from the efficient delivery of approved capital programs, and then share these benefits with customers over time. Conversely, poor performers are penalised for inefficiency and poor service outcomes.
- The incentive-based regulatory framework has delivered significant reductions in network prices across the NEM over the last five years with distribution charges falling annually between 3% and 5%, in real terms, as shown in Figure 2.5, and these reductions are expected to continue.

Figure 2.5: Figure 10 from the AER’s 2017 Benchmarking Report²²

Figure 10 Forecast impact of AER decisions on residential electricity charges (average annual % decline), by DNSP



Notes: Real average annual impact on electricity charges for a typical residential customer in that jurisdiction in the current regulatory period. The data accounts for the impact of decisions by the Australian Competition Tribunal. The estimates are based on information available at the time of the decisions, and may change due to factors such as annual updates to capital costs. They also do not account for changes in other components of a retailer bill, such as wholesale costs and a retailer’s profit margins. Outcomes will vary among customers, depending on energy use and network tariff structures.

Sources: AER regulatory determinations and final decisions on access arrangements.

- Since privatisation, distribution prices for SA Power Networks (**SAPN**) customers have declined by 9% in real terms and over the last decade distribution prices for CitiPower and Powercor customers have declined by 1% and 6%, respectively, in real terms. The cost of providing service has decreased and service has improved despite increasing customer numbers and the requirement to comply with new obligations.²³
- The proposals submitted to the AER by the most recently privatised NSW businesses indicate further reductions in networks charges over the 2019-24 regulatory period.

²² AER, Annual Benchmarking Report, Distribution Network Service Providers, November 2017, p. 25.

²³ See Spark Infrastructure 2018 half year results presentation at <https://www.sparkinfrastructure.com/investor-centre/reports-and-presentations>

3. Certainty, stability and predictability remains paramount to keep the cost of capital low

The NSG outlined the importance of stable and predictable regulatory arrangements and decision-making processes to maintaining low costs of capital, and the need for a high threshold for change, in its May 2018 submission to the AER. Most of the experts participating in the AER's concurrent evidence agreed that all stakeholders benefit from stability and predictability.²⁴

The AER has stated that it values certainty, stability and predictability but this is not apparent in the draft RORG

- The significant reduction in the ERP suggests that the value of stability and predictability in keeping the cost of capital low is not appreciated by the AER.
 - The AER has selectively and inconsistently referred to these principles (see Section 5 for more detail); and
 - Did not applied them to the overall rate of return.
- The Independent Panel also identified that the AER applied principles of certainty, stability and predictability inconsistently.²⁵

Investors must have confidence in the regulator's decisions and decision-making process

- The viability of the regulatory compact depends critically on investors having confidence in the future consistency of the AER's decisions. In simple terms, a reliance on the AER doing what it says it will do (and what it said in the past that it would do). **This is even more paramount in the absence of any review processes that ensures appropriate 'checks and balances' on decisions and outcomes.**
- The AER's draft RORG is not consistent with past decisions or with reasonable expectations of electricity and gas network investors.
- Re-opening the methodology when changes were meant to be incremental and opting to err for the low end of reasonable parameter value ranges, to select a lower value than would otherwise have been the case, will signal to investors that the regulator intent is to deliver short-term price reductions at the expense of long-term impacts on customers. This will exacerbate the adverse incentive effects on future investment arising from the lower overall regulated rate of return.
- The AER acknowledges the risks associated with distorting investment incentives in favour of short-term price reductions: (emphasis added)²⁶

"... consumer representatives have clearly indicated, during this consultation process, a willingness to accept a higher level of risk in respect of the rate of return and the investment it is intended to promote in exchange for lower prices.

*However, we also accept submissions made by service providers and investors that we should exercise our judgement with care. There is an ongoing need for investment to replace existing assets, to address locational peak demand and to reconfigure networks in response to changes in the mix of generators. **Continued investor confidence is important in achieving these investment outcomes. We are conscious that the rate of return should be set in a manner that is sufficient to attract capital on a long-term sustainable basis, given the opportunity costs, if we are to achieve the NEO and NGO.**"*

²⁴ CEPA, Rate of Return Guideline review – Facilitation of concurrent expert evidence, 21 April 2018, pp.14.

²⁵ Independent Panel, p. 40.

²⁶ AER, Rate of Return Guideline, Explanatory Statement, July 2018, pp 28-29.

- However, these statements appear in the draft RORG with no corresponding explanation as to how the need for ongoing investment or investor confidence has been taken in to account and they are not consistent with an outcome where regulated returns are reduced so significantly, and more so than any prior decision.
- This importance of building trust was noted by the Independent Panel: (emphasis added)

*“A particular rate of return does not achieve the national objectives just because finance theory says it should. The national objectives are achieved not by finance theory but by the rational, informed actions of the firms and individuals who comprise the regulated industries: debt investors, equity investors, the managers and employees of regulated firms, consumers large and small, and the practitioners who represent their interests before regulatory tribunals. **The Draft Guidelines will be capable of promoting the national objectives only if it wins the trust of, and induces the efficient conduct of, all those parties.**”²⁷*

4. The Draft RORG does not address the prevailing market conditions

The NSG considers that overall investors face more risk now than they did at the time of the last RORG review and the outcome of the current review should reflect this.

A lower ERP does not reflect prevailing market conditions

The draft RORG produces a return on equity that is not forward-looking – there is no adjustment for forecast bias of the SLCAPM, the equity beta estimate ignores more recent changes in systematic risk and the MRP estimate no longer incorporates any forward- looking estimates. In an environment where the RORG cannot be re-opened, these forward-looking risks must be taken in to account.

- We agree with the experts that where a risk is identified and is assessed to have an asymmetric impact on the risk of achieving the regulated return, an adjustment to the allowed return on equity should be made.²⁸ The AER has not adjusted the allowed return for the forecast underestimation bias of the SLCAPM.
- The majority of experts agreed that, when capturing systematic risk, the most weight should be given to market data for the three most comparable firms and that the most recent data provides important information on the direction of equity beta estimates.²⁹ The equity beta estimates for the remaining ‘live’ listed firms and for the most recent period have increased.³⁰ If the AER estimate was to include the increase in systematic risk, the equity beta estimate would be expected to increase not decrease.
- Changes in sovereign, regulatory, technological and inflation forecast error have not been captured in the equity beta estimate. All experts except one agreed that NSPs have not become less risky since the 2013 RORG³¹ and the updated empirical analysis supports an increase in equity beta. The AER has, however, reduced the estimate of equity beta.

²⁷ Independent Panel, p. 67.

²⁸ CEPA, Expert Joint report, p. 23.

²⁹ CEPA, Expert Joint report, p. 50.

³⁰ CEPA, Expert Joint report, p. 52

³¹ CEPA, Expert Joint report, p. 25.

Risk has increased and is expected to continue to increase

The RPPs require that the regulated rate of return compensate an NSP for commercial and regulatory risks. As highlighted, the draft RORG does not compensate NSPs for these risks or continued increases in these risks.

- The draft RORG incorrectly considers technological risk as non-systematic risk and therefore does not compensate for it through the rate of return. We do not consider that the unique technological risks facing NSPs are fully diversifiable.
 - Energy networks are currently transitioning to support the changing patterns of energy flow, to adopt new technologies to unlock opportunities for more innovative delivery solutions and to efficiently match demand and supply. Uncertainty around the best technological path to effect this transition increases equity risk.
 - To view network sector as the only market segment facing disruption from technological advances is to ignore reality. Hospitality, retail, finance, automotive, manufacturing and IT are just some of the industries that persistently face technological risk. These developments are occurring globally in developed and emerging markets, thus limiting portfolio diversification opportunities.
- The draft RORG proposes that no compensation for regulatory risk is required³², as investors would be able to diversify away such risks by holding a market portfolio. This interpretation is in direct contrast to what is required under the RPPs. Regulatory and sovereign risk associated with frequent and significant changes to the regulatory framework in contravention of the governance arrangements in the Australian Energy Market Agreement (**AEMA**) undermines the checks and balances of the regulatory system.
- Regulatory and sovereign risk has increased significantly since the 2013 RORG and is expected to continue to increase given the propensity for the Commonwealth government to intervene in the regulatory framework, the significant number of additional recommendations before the COAG Energy Council that will have a direct impact on NSPs and the impending removal of effective judicial review rights through proposed legislative amendments to replace the 2013 RORG with a binding legislative instrument.
 - Both Moody's and S&P have recently stated that recent regulatory measures to reduce prices and associated energy policy vacuum could be credit negative for the sector.^{33,34}
- The draft RORG does not address the increased risk to equity holders in a low inflation environment, which we raised in our prior submission.³⁵
 - The AER and its consultants have acknowledged that there is a problem with the interaction between the AER's Post Tax Revenue Model and Roll Forward Model that results in equity holders bearing the risk of the AER's forecast of expected inflation being inaccurate and that the impact could be substantial.³⁶
 - Ofgem in the United Kingdom recognised this risk in its 2014 review of returns. Ofgem outlines that there is additional risk to equity holders when debt is incurred in nominal terms in low inflation environments and modified prima facie the downward adjustment to the return on equity as a result. Ofgem reduced the return on equity by 0.3% rather than 0.8% to reflect this additional risk (i.e. there was an inherent increase of 50bps to compensate for this risk).³⁷

³² AER, Rate of Return Guideline, Explanatory Statement, July 2018, p. 95.

³³ Moody's "Proposed changes to Australia's regulatory rules are credit negative for regulated energy networks", July 2018

³⁴ S&P Global "Australia's energy policy uncertainty delays vital investment for system reliability", September 2018

³⁵ NSG, Submission on the Rate of Return Guideline Review, 4 May 2018.

³⁶ AER, Regulatory treatment of inflation, Preliminary position, October 2017, p. 77 and SAPERE, Efficient allocation and compensation for inflation risk, 25 September, p. 17.

³⁷ Ofgem, Decision on our methodology for assessing the equity market return for the purpose of setting RIIO-ED1 price controls, February 2014, p. 12.

5. Updated empirical analysis

The following sections outline our views on the updated empirical analysis and the changes proposed by the draft RORG. We remain of the view that changes to estimates should only occur where there are material changes in relevant market conditions and finance theory, and changes to an approach should provide a demonstrably better estimate.

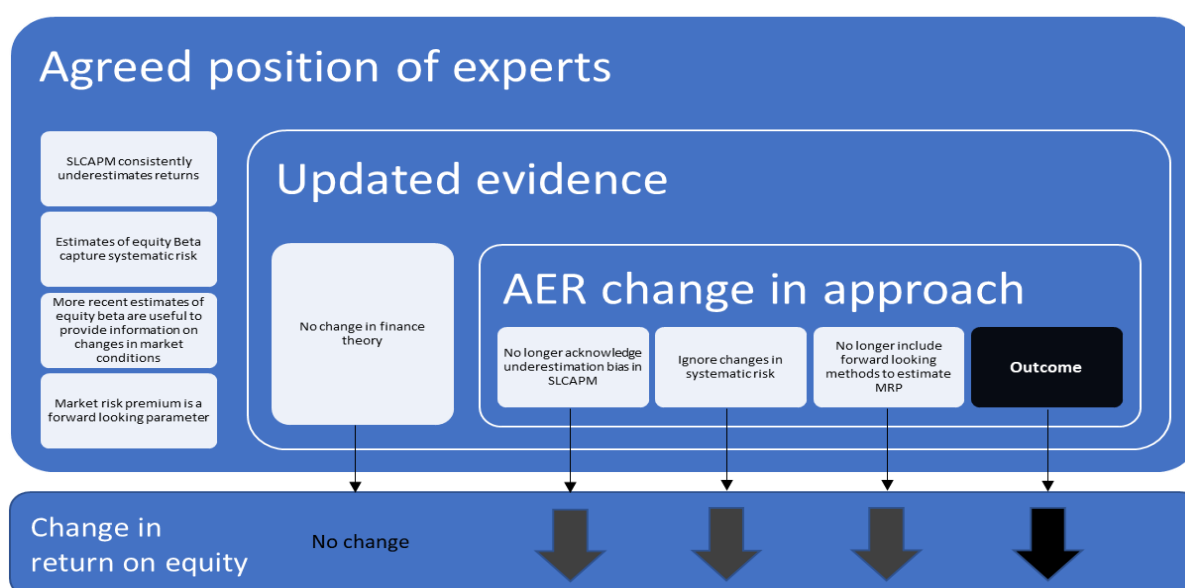
Return on equity

Each of the departures from the approach adopted in the 2013 RORG reduce the regulated return on equity in any decision by the AER on the regulated rate of return

- The AER has adopted a straight application of the SLCAPM model for estimating the return on equity, rather than the ‘foundational model’ approach to the SLCAPM adopted in the 2013 RORG.
- This is a significant departure from the 2013 RORG and was rejected by the AEMC in its comprehensive review and finalisation of the rate of return rules in 2012.
- We note that *The Statutes Amendment (National Energy Laws) (Binding Rate of Return Instrument) Bill 2018* (the **Bill**) has removed the requirement for the AER to comply with the rate of return rules in the national electricity and gas rules and the AEMC’s power to make these rules. Nevertheless, the Bill requires the AER to explain how changes better achieve the NEO, NGO and comply with the RPPs.
- The most significant differences in proposed approach is to no longer apply an adjustment for the underestimation forecast bias of the SLCAPM and no longer include forward-looking estimates of the MRP. These changes to the approach to estimating the return on equity were not supported by the evidence or experts. Further, while the AER’s experts refer to the adoption of an alpha adjustment by investors to replace the need to adjust for low beta bias, the AER does not include such an adjustment.³⁸
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Figure 5.1 identifies the impact of the changes proposed by the AER for the return on equity compared with the agreed position of experts and the updated evidence.

Figure 5.1: Illustration of impact of AER change in approach to estimating the return on equity



³⁸ Partington and Satchell, 25 May 2018, p. 28

The significant reduction in ERP will adversely impact on investment, particularly in an environment where the forward-looking risks to investors are increasing and regulatory processes are unpredictable

- Given that there have been no significant new developments in finance theory and available academic literature, any change must be weighed up against the impact on stability and predictability.
- Changes that result in a lower return on equity, notwithstanding evidence demonstrating higher expected returns, is unpredictable, de-stabilising and inconsistent with prevailing market conditions.
- Discarding of the role of the Black CAPM and DGMs in determining the return on equity is inconsistent with having regard to the relevant estimation methods, financial models, market data and other evidence that the AER had regard to as recently as May 2018 in the TransGrid final decision in accordance with legislative requirements.³⁹

Equity beta

The AER has changed its approach to estimating equity beta, contrary to the evidence and changes in systematic risk, to produce a lower estimate

- The AER's estimate of equity beta has reduced from 0.7 to 0.6. This would suggest that the risk faced by the benchmark efficient entity (**BEE**) has decreased by more than 14%.
- The material change in equity beta is inconsistent with general expectation that the equity beta should not change materially over time:
 - The prevailing market data for equity beta does not change materially over time;
 - Experts agreed that there is a need for a high bar to change⁴⁰; and
 - The AER relied on the view that systematic risk and equity beta are relatively stable and change slowly when supporting the relevance and inclusion of de-listed firms in the comparator set.⁴¹
- The AER has indicated that technological, regulatory and forecast inflation error risk are systematic risks captured in equity beta. The directional movement in equity beta benchmarks suggest that systematic risk has increased. However, this has not been taken in to account in the reduced estimate of equity beta.

The information and evidence support a marginal increase in the estimate of equity beta

- The AER's updated estimates for every scenario are higher than they were in 2013 RORG.
- The estimates for comparator firms that remain listed since the 2013 RORG, and therefore remain subject to changes in market conditions, have increased.⁴²
- Regulators around the world are more inclined to draw information from recent share price data with the UK and New Zealand regulators giving greatest weight to the most recent five-year period and making reference to data showing regulated firms betas have been either trending up or trending down.⁴³ In Australia, the more recent five-year period estimates have increased.
- Estimates from international comparator firms are all greater than 0.7.
- Estimates from other Australian economic regulators are all 0.7 or higher.

³⁹ National Electricity Rules, Chapter 6, Clause 6.5.2 (e)(1)

⁴⁰ CEPA, Expert Joint Report, p. 39.

⁴¹ AER, Draft Rate of Return Guideline, Explanatory Statement, July 2018, p. 264.

⁴² ENA, AER Review of the Rate of Return Guideline, Response to Discussion Papers and Concurrent Expert Evidence Sessions, 4 May 2018, p. 53, 54.

⁴³ John Earwaker, p.12.

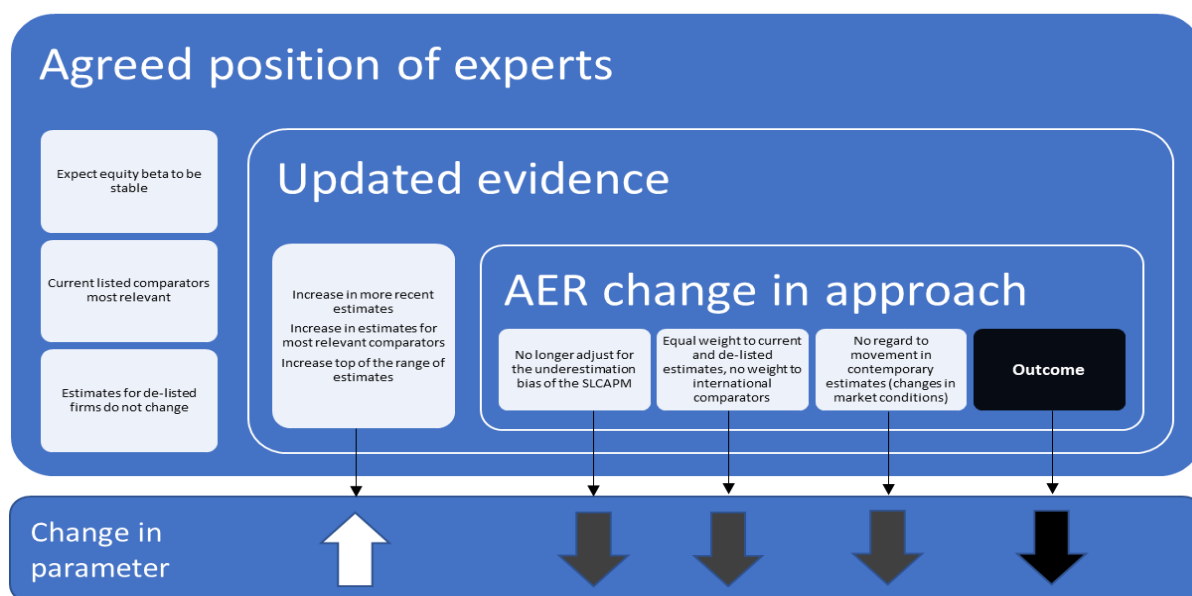
- The top of the range of estimates adopted by the AER has increased from 0.7 to 0.8.

To estimate a lower equity beta, the AER has not only changed the approach but also changed the weighting of relevant material

- The AER has removed the adjustment to the equity beta previously adopted to address the underestimation bias in the SLCAPM.
- Equal weight is now placed on historical estimates from de-listed firms and current estimates from ‘live’ listed firms – this is contrary to the agreed positions of most experts.⁴⁴
- Increases in systematic risk evident in updated estimates for the ‘live’ firms and in the estimates for the most recent five-year period is given no weight.
- No weight is placed on international comparator firms.
- No weight is placed on the estimates of other Australian economic regulators or their reasoning supporting higher estimates.

The impact of the changes in the AER’s approach to the estimate of equity beta compared with the agreed expert views and updated evidence is presented in Figure 5.2.

Figure 5.2: Illustration of impact of AER change in approach to equity beta



We do not support a change in the estimate of the equity beta

- The AER comprehensively reviewed equity beta through the 2013 RORG and reduced the equity beta at that time. In the absence of information suggesting that this assessment was in error or that the updated estimates have decreased, we would expect no change to equity beta for the 2018 RORG.
- The AER revised its range of equity beta estimates so that the new top of the range estimate of 0.8 has increased above the 0.7 estimate of equity beta applied by the AER in every decision since the 2013 RORG.
- The AER used the principles of stability and predictability to argue that it could have made a larger decrease in the estimate based on its empirical analysis. However, if. If these principles of predictability

⁴⁴ CEPA, Expert Joint Report, 21 April 2018, p. 47.

and stability were genuinely given weight, the absence of a substantiated material change should result in no change in the equity beta estimate regardless of the change in the range of estimates.

- The current estimate (prior to the draft RORG) of equity beta of 0.7 is in the AER's target range of 0.4 to 0.8.
- Repeated reductions in equity beta (from 1 to 0.7 over the last 10 years) and contrary to the evidence, creates an expectation that the AER is likely to reduce the estimates of equity beta in the future regardless of the evidence.

MRP

The AER has changed its approach to estimating the MRP, contrary to updated analysis to produce a lower estimate

- The AER has reduced the estimate of the MRP from 6.5% to 6.0%. This would suggest that the premium expected over the RFR has reduced by more than 8%.
- Prior to the draft RORG, the AER had not changed its estimate of the MRP since the 2013 RORG despite a fall in the risk-free rate from 4% to 2.5% and a 1.5% increase in DGM estimates.
- This suggests that the AER does not consider that there is an inverse relationship between the MRP and risk-free rate, but rather that a one-for-one relationship exists. This is contrary to the agreed position of experts⁴⁵ and an extreme position compared to UK regulators.⁴⁶
- The AER has fixed the MRP for the last five years despite significant changes in market conditions.
- We support a fixed MRP for the period of the 2018 RORG because it provides stability, predictability and transparency and we do not expect estimates from HERs, DGMs or analyst surveys to vary more widely over the next four years than they have over the last five years.
- As a result of fixing the MRP and equity beta in the 2018 RORG, the AER has determined a constant ERP for the period of the RORG. Therefore, comparisons of ERPs determined by regulators in other jurisdictions, including overseas, are directly relevant in assessing whether the estimated return on equity is sufficient to attract capital in prevailing market conditions.
- The AER's estimate of the MRP relies on three estimating methods: HERs, DGMs and analyst surveys.
 - MRP estimates from HER, DGM and analyst surveys have all increased.
 - All experts agreed that HER estimates, DGM estimates and analyst surveys are all relevant to estimate the MRP.⁴⁷
- Despite this, the AER has reduced the MRP.

To estimate a lower MRP, the AER had to not only change the approach, but also place no weight on relevant material

- The AER no longer puts any weight on MRP estimates from DGMs or analyst surveys.
- Although there were differing views about whether HERs should be preeminent, all experts agreed that HERs must be considered alongside DGMs and analyst surveys.⁴⁸ There was no support at all for HERs to be relied on alone.

⁴⁵ CEPA, Expert Joint Report, p. 61.

⁴⁶ CEPA, Expert Joint Report, p. 10.

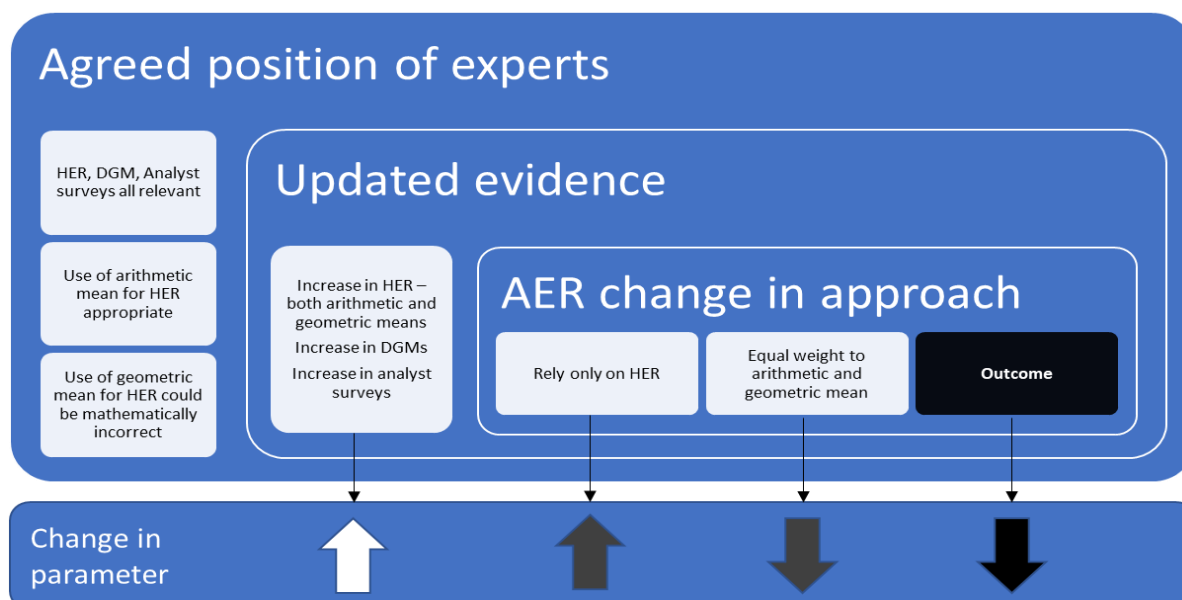
⁴⁷ CEPA, Expert Joint Report, p. 58.

⁴⁸ CEPA, Expert Joint Report, p. 58.

- The AER now assigns more weight to the geometric mean estimates of HERs in order to reduce the HER estimate.
- All experts agreed that the arithmetic mean of HERs was appropriate. However, there was strong disagreement on the relevance of geometric means. The disagreement with geometric means was based on a view by experts from the AER and the Energy Networks Australia (ENA) that it is mathematically incorrect.
- Given the agreement with the use of arithmetic means and the uncertainty about the validity of geometric means, under no circumstances should the geometric means be given equal weight.

The impact of the changes in the AER’s approach on the estimate of the MRP compared to agreed expert views and updated analysis is presented in Figure 5.3.

Figure 5.3: Illustration of impact of AER change in approach to MRP



The evidence and analysis support an increase in the MRP

- The AER revised the estimate of MRP materially downward from 6.5% (applied by the AER in every decision since the 2013 RORG) to 6.0%.
- The propensity to change an estimate without a material change in the underlying market evidence affecting its value or identification of a materially better approach, and for the change to be contrary to the available evidence, creates uncertainty over the long-term.
 - The estimate of MRP from the forward-looking methods of analyst surveys and DGMs has increased.
 - Estimates of HERs have increased.
 - The current estimate of the MRP remains within the AER’s revised range for MRP of 5% to 6.5%.
- Any short-term stability benefit of fixing the MRP for the term of the RORG is more than outweighed by the long-term expectations that the estimates will result in a lower return on equity regardless of changes in market conditions, through selective use of approach or averaging methods.
 - If the AER puts weight on predictability, we would expect the MRP to increase with the increase in estimates.
 - If the AER puts weight on stability, we would expect to see no change in the MRP.

Return on debt

A change to the approach to estimating debt is not sufficiently supported by the analysis or evidence

We support the AER in reviewing new information and assessing whether new information is sufficiently robust to improve the quality of the estimate.

- We accept that the AER has updated its approach to estimating the benchmark assumptions for debt yields by including an additional third-party data provider having reviewed the merits of the provider and the estimates.
- The AER has changed its approach to estimating debt yield by applying an arbitrary weighting of the broad A and broad BBB yield curves. However, the AER has not demonstrated that the change results in a better estimate.
- Further analysis should be undertaken to identify an appropriate weighting. The assessment undertaken of actual cost of debt being lower than estimated debt yields is not sufficiently robust to support an arbitrary weighting that has the effect of reducing the estimate.
- We do however warn that the draft RORG if implemented will place further pressure on credit metrics as previously stated, and hence the benchmark concept of a BBB+ credit rating will need to be re-examined and likely reduced to BBB. That is, individual parameter changes cannot be made in isolation without a holistic review of the total impact, otherwise the long-term interests of consumers could be detrimentally impacted.

Value of imputation credits

The AER has changed its approach to estimating the value of imputation credits, including a change to the definition of the BEE, to produce a higher estimate

- The AER has increased the estimate of the value of imputation credits for the BEE from 0.4 to 0.5 by changing its approach materially from that previously adopted in all of its decisions over the last five years, including as recently as May 2018, and comprehensively tested through the Australian Competition Tribunal and the Australian Federal Court.
- This change would suggest that the value of imputation credits has increased by 25%. This is not an incremental move as suggested by the AER⁴⁹ and the AER has not demonstrated that such a significant change will have no negative long-term implications for customers due to lower investment and higher risks of less reliable and secure energy supply.
- The estimate of 0.5 is not a materially better estimate. It is not an estimate for the BEE at all.

The definition of the BEE has changed but is not adopted in estimating the value of imputation credits

- The AER's approach requires the 'utilisation' value of imputation credits to be estimated for the BEE.
- We accept the AER's utilisation value approach because the Federal Court has found that this approach is open to the AER.
- We also support the AER's approach to estimating the value for a BEE that is an Australian company. This approach was also supported by experts.⁵⁰
- However, we do not support the AER's specification that the BEE is a listed Australian Company (rather than any Australian company). This change in the definition of the BEE has the effect of excluding the

⁴⁹ AER, Draft Rate of Return Guideline, Explanatory Statement, July 2018, p. 389.

⁵⁰ CEPA, Expert Joint Report, p. 71.

approach proposed by the ENA and the NSG to adopt a direct estimate for Australian companies from Australian Taxation Office (ATO) statistics.

- The AER has rejected the proposed direct estimate of the value of imputation credits available from ATO data because it considers the data from the ATO is unreliable.
- Instead the AER adopted a hybrid estimate of the distribution rate for the ASX top 20 firms and an utilisation rate for all companies which does not produce an estimate consistent with the AER's BEE (all listed equity).

The top 20 listed companies are not a good comparator with the BEE

- We agree with experts that the relevant BEE characteristics for estimating the distribution rate is that it pays tax at the company tax rate and that it is necessary to use data from a broader range of companies that are comparable in a relevant way for estimating that parameter.⁵¹
- The AER's estimate relies on a distribution rate estimated from a narrow set of top 20 listed companies.
- The top 20 listed companies have not been shown to be comparable with the BEE NSP, and indeed almost 50% of its market weights are of financial firms.⁵²
- The characteristics that mostly impact on the distribution rate are the dividend payout rate and the proportion of foreign profits. The AER has not considered the comparability of the top 20 listed firms with the BEE in this regard but must do so:
 - A significant factor raised in the expert session was that the capital intensity of the firm will affect comparability with the BEE NSP.⁵³ The importance of this was agreed by most experts.⁵⁴ The capital intensity of the firm will affect the dividend payout ratio.
 - The top 20 listed firms have 40% foreign revenue. The BEE has 100% domestic revenue.⁵⁵
 - The AER has outlined that the top 20 listed companies were selected because of the availability of audited data. However, all listed firms are audited. It appears that instead, the top 20 were used because of the size of the task of estimating the distribution rate for all listed firms. This results in inconsistent estimation approaches for the utilisation and distribution rates.
 - The Independent Panel also considered there would be merit in extending the analysis beyond the top 20, especially in view of the concentration of finance sector securities in the top 20 and that the information to undertake this work is readily available.⁵⁶

⁵¹ CEPA, Expert Joint Report, p. 72.

⁵² ASX 20 as at 1 September 2018

⁵³ CEPA, Expert Joint Report, p. 78.

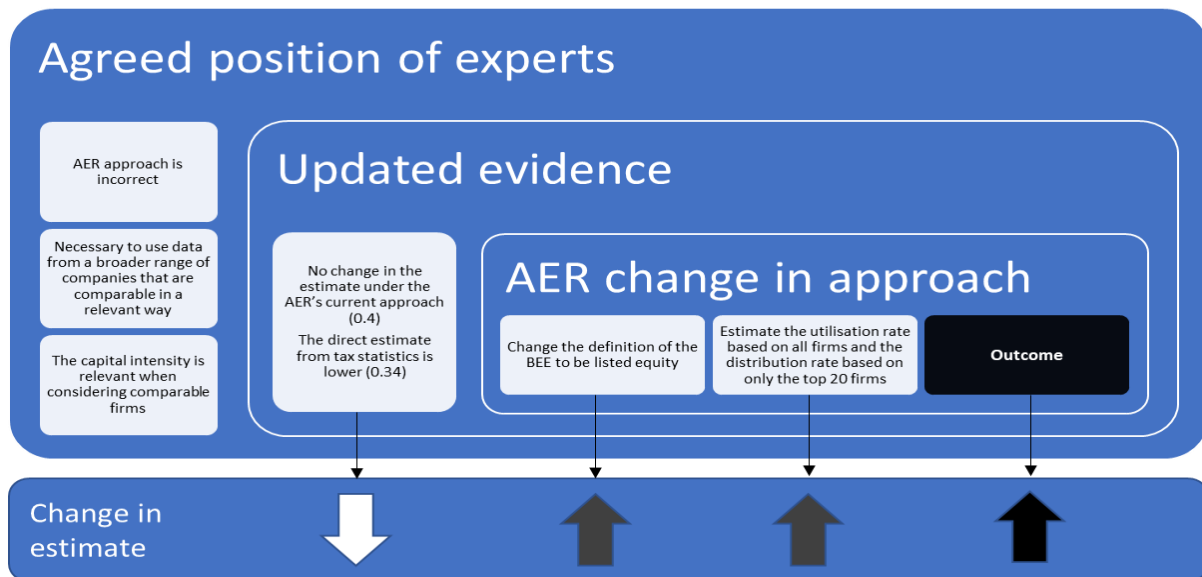
⁵⁴ CEPA, Expert Joint Report, p. 72

⁵⁵ ENA, Response to Draft Guideline, 25 September 2018.

⁵⁶ Independent Panel, p. 53.

Figure 5.4 illustrates the impact of the AER’s change in approach on the value of imputation credits compared to the agreed position of experts and the updated evidence.

Figure 5.4: Illustration of impact of AER change in approach to the value of imputation credits



We continue to support the use of ATO data to provide a direct estimate of the value of imputation credits using the AER’s utilisation approach of 0.34.

- The direct estimate of the value of imputation credits from all companies produces a better estimate than the AER’s method because:
 - It does not require a separate estimate of the utilisation and distribution rates which require the use of ATO franking account balance data that the ATO has indicated suffers from data integrity issues.
 - It does not create a hybrid estimate of the value of imputation credits for all listed equity and all equity rather than an estimate for the BEE.
 - It considers a broader range of comparable firms that are more likely to represent the characteristics of the NSP BEE.

Other 2018 RORG Parameters

We support retaining the approach on all other 2018 RORG parameters, which provides stability and predictability and is transparent.

Summary

Table 5.1 below summarises the outcomes under the draft RORG compared to the evidence, expert views and the submissions of the NSG.

Table 5.1: Summary of draft RORG with evidence, expert views and NSG

Issue	Evidence	Experts	NSG	AER	Outcome
Return on debt	No material changes in estimates or undeniable better estimate	Not considered	No change proposed	Reduction in debt yield based on arbitrary weighting adjustment	Reduction in rate of return
Approach to estimating ROE	No new developments in finance theory or academic literature	No new developments in finance theory or academic literature	No change proposed	Apply the SLCAPM with no regard to underestimation bias or forward-looking estimates	Reduction in rate of return
Equity Beta	Increase in empirical estimates	Expect equity beta to be stable and current listed firms most comparable	No change proposed	Remove weight on international firms and apply equal weight to current and de-listed firms. Ignore more recent estimates that provide directional information on movements in systematic risk	Reduction in the rate of return
Market Risk Premium	Increase in each of the three relevant estimates (HER, DGM, analyst surveys)	All three estimates relevant Agreement on arithmetic mean and disagreement on geometric mean	Increase in MRP	Rely only on HER and change weight on geometric and arithmetic means	Reduction in the rate of return
Gamma	No material changes in estimates and only one estimate that is free of ATO FAB data issues	AER approach incorrect Necessary to use data from a broader range of companies that are comparable, and the capital intensity is relevant when considering comparable firms	Reduce gamma (adopt the direct estimate)	Re-define the BEE to be only listed firms and adopt an estimate that is not for the BEE (hybrid all equity and the top 20 listed firms)	Reduction in the rate of return

6. Long term prices will increase and services to customers will deteriorate from the proposed significant reduction in the regulated rate of return and value of imputation credits

The AER's draft RORG estimates that the efficient cost of capital (WACC) is 45 basis points lower than it was when the AER's 2013 RORG was applied in May 2018 and the value of imputation credits has increased by 25% since that time. The updated empirical evidence and forward-looking assessment of risk support an increase in the rate of return and a reduction in the value of imputation credits.

The Independent Panel describes the AER's assessment as to whether the draft RORG achieves the objectives as follows:

"The explanatory statement addresses each technical step in the rate of return calculation, it does not sufficiently consider or demonstrate how each of the decisions about individual parameters, when taken together to produce a final estimate of the rate of return and value of imputation credits, will contribute to the achievement of the national objectives."⁵⁷

The significant reduction in returns will likely have a detrimental impact on investment, incentives and the long-term interests of customers in terms of price and service. The cost of capital will increase and the incentive to invest will reduce. This will reduce the capital allocated to NSPs to undertake important new and innovative investments, putting at risk new connection of lower cost generation and facilitation of new technologies. Investment will be distorted toward short-term investments or deferring investment by accepting greater risk.

The AER must identify and assess the impact of a significant reduction in the regulated rate of return against the framework provided in the national energy laws.

This assessment should include:

- The associated increased risk of more unsupplied energy (reduced network reliability) due to the lower proposed ERP and its effect on long-term investment incentives;
- The impact of less investment and weaker incentives for efficiency on the price, quality, safety and reliability and security of supply of electricity/gas;
- The views provided in stakeholder engagement forums accompanying NSP price review processes in recent years as well as customer representatives to the RORG process about whether customers are willing to accept the increased risks associated with a less reliable and secure electricity supply;
- Whether a short-term reduction in electricity prices may result in higher electricity prices than otherwise in the long-term due to a bow-wave of deferred investment being required and/or the need for a higher rate of return in future to create the incentive to invest if the current rate of return is set too low; and
- Whether a BEE is able to maintain the benchmark credit rating if it earns the regulated rate of return estimated consistent with that credit rating. This is a fundamental consistency check that should be assessed prior to finalising the RORG.

⁵⁷ Independent Panel, p. 67.

Regulated returns lower than the efficient cost of capital will increase prices and reduce services to customers in the long-term

Table 6.1 presents the potential impact on long-term prices and services from reduced incentives to invest and lower regulated returns on capital.

Table 6.1: Long-term impacts on prices and services of the rate of return being too low

Long-term impacts on prices	Long-term impacts on service
Deferred investment in the short-term leading to 'catch up' investment required in future periods	Increased risk across the system resulting in a less resilient network to minor disruptions and higher likelihood of low probability, high consequence events
Increase in the cost of capital due to an increase in uncertainty and risk of recovering the capital cost of investment	Stagnation of innovation related investment reduces adoption of new technology to improve system operation and support distributed energy resources (DER) and two-way energy flows contrary to energy consumers revealed preference for such services.
Stagnation of investment in efficiency initiatives and innovation slowing the rate of improvements in efficiency and sharing of benefits with customers	Less timely connections as system constraints increase Efficiencies not pursued with consumers wearing higher costs
Favouring investment in assets with shorter lives and higher cost 'just in time' investments over longer term lower cost options.	Disincentive to undertake high risk construction projects, long life replacement projects and discretionary new connection activity.

Incentives for investment must be just right – not too strong or too weak

- The first indication of under-investment in (or failure to adequately maintain) network assets is through the infrastructure becoming more vulnerable to low probability high impact events. Reliability incidents in the United States (e.g. California) serve to highlight the potential adverse impacts from inefficient investment levels in infrastructure services.⁵⁸
- Similarly, the regulatory environment can adversely affect an NSP's incentive to sustain their investment in their networks. Such outcomes have been evidenced in the past in Queensland⁵⁹ and by a Parliamentary Committee in the United Kingdom.⁶⁰
- A significantly lower rate of return, through its impact on investment incentives, could have a pendulum effect on broader regulatory settings. A significant component of RAB growth in NSW and Queensland was more than \$5 billion in capital investment incurred to comply with new excessively cautious reliability standards introduced by the NSW and Queensland Governments in response to power outages in 2004 that were found to be caused by underinvestment.⁶¹
- The manifestation of under-investment in infrastructure can be very subtle and take a long period of time to materialise. The fact that it is a characteristic of infrastructure industries that they can operate without

⁵⁸ U.S.-Canada Power System Outage Task Force (2004), Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations, p 140

⁵⁹ Queensland Government (2004). Electricity Distribution and Service Delivery for the 21st Century - Detailed Report on the Independent Panel ("Somerville Report"), p 51

⁶⁰ House of Commons Trade and Industry Committee, Resilience of the National Electricity Network: Third Report of Session 2003-04 Volume 1, 10 March 2004, page 3. Available from <http://www.publications.parliament.uk/pa/cm200304/cmselect/cmtrdind/69/69.pdf> as at 1 March 2006

⁶¹ The Grattan Institute, Down to the wire: A sustainable electricity network for Australia, March 2018, p. 17-18.

apparent deterioration for long periods of time in the face of regulatory induced under-investment, only serves to underscore these concerns.

The value of deteriorating reliability must be assessed

- One way to assess the impact of a lower return is to assume that the lower return could result in a higher risk to reliability.
- Applying the AER's Sensitivity Matrix Excel spreadsheet (which calculates crude rule of thumb impacts of changes in the rate of return and household electricity bills), we estimate that the adoption of the draft RORG will result in a reduction in annual household electricity bills of only around 2% (or \$34 in NSW assuming an annual bill of \$1,697⁶²). This assumes that any reduction in network prices is fully passed through to retail prices.
- In a worked example using NSW/Ausgrid 2016/17 benchmarking RIN data⁶³ and AEMO VCR/kWh data⁶⁴ (escalated to March 2017 value) the lost value to residential customers in NSW of increasing the probability of only a very small additional amount (0.005%) of unsupplied energy by 5% is \$61 million - greater than the benefit received from the reduction in the regulated rate of return net of the value of imputation credits of \$52 million.
- The assumptions and calculation are presented below (\$2016/17):
 - Assumptions
 - Residential VCR estimate = \$27.81/kWh
 - Annual residential consumption (2016/17) = 8,738,000,000 kWh
 - Additional unsupplied energy = 0.005% of total residential supply = 43,690,000 kWh
 - Probability of additional unsupplied energy = 5%
 - Number of residential customers = 1,524,732
 - Calculation
 - Probability-weighted cost of lower reliability: $\$27.81 * (43,690,000 \text{ kWh} * 0.05) = \$60,750,945$
 - Benefit of lower household bills: $\$34 * 1,524,732 = \$51,840,888$
- While recognising the crude rule of thumb nature of this calculation, it is clear that the trade-off between less reliable networks and electricity affordability needs to be carefully considered having regard to the NEO and NGO given the potentially larger costs of this trade-off relative to the benefits.

The cost to consumers of inefficient deferral of significant and innovative investment will be significant

- The potential impact on consumers of not undertaking transmission investment identified in the Integrated System Plan could conservatively cost customers more than \$1 billion in savings. Similarly, not enabling distributed energy resources in an efficient manner could cost over \$4 billion in savings in wholesale resource costs.⁶⁵
- ElectraNet has also valued the impact on customers of delays in the South Australia to NSW interconnector. The preferred option is estimated to deliver net market benefits of around \$1 billion over

⁶² ACCC (2018), Retail Electricity Pricing Inquiry, p.xv.

⁶³ Ausgrid 2016-17, Economic benchmarking RIN - Templates

⁶⁴ AEMO (2014), Value of Customer Reliability – Application Guide, Final Report, p.4.

⁶⁵ AEMO, Integrated System Plan, July 2018, p.6.

21 years (in present value terms), an overall reduction in the average annual residential customer bill of up to \$30 in South Australia and \$20 in New South Wales.⁶⁶

- Deferral of projects that lead to the adoption and support of new technologies and innovation in operation and services can delay savings to customers from behind the meter investment, two-way energy flows and new connections. There is evidence to suggest that demand for these services will increase strongly over time, including due to increasing penetration of distributed generation.

The AER needs to carefully assess – and not simply assume - customers’ preference of short-term price reductions over deteriorating longer-term service levels.

- Customer groups participating in NSP price review consultation processes shared the view that long term reliability and service levels should not be put at risk for short term price considerations. It is not clear how the AER has assessed the views expressed in price review processes with the views put forward by customer representative groups in the RORG process.
- There have been several reviews and a significant amount of available evidence in reports by the Essential Services Commission, the ACCC and the AEMC about the contemporary nature of retail energy competition and its effectiveness. These reports identify the relatively high risk that reductions in network prices, including those already delivered or a further reduction in lower regulated returns, will not automatically or fully flow through to retail energy prices.
- The long-term impacts on incentives, investment, prices and services must be given sufficient weight in any trade off and assessed against the risk that short-term reductions in prices are received at all.

Incentives and network utilisation

- Consumer representatives have suggested during this RORG process that declining network utilisation is a reason for the AER to have less regard to investment incentives in determining the regulated rate of return.
- However, it is important to note that networks are built to serve maximum (peak) load not average demand and are underpinned by reliability standards designed to achieve this objective. Across Australia, there is considerable fluctuation in the peak demand placed on electricity networks, as opposed to the average load, with much higher demand in extreme summer heat. Peak loads also vary by grid location across networks.
- Hence, declining average network utilisation is irrelevant to the peak demand issue. While there has been a slowing in peak demand growth at the network-wide level across the NEM in recent years, this is not true uniformly.
- For example, three peak demand records were broken in Queensland in mid-February 2018 during the extreme hot spell that swept the state. The highest demand recorded on the Powerlink transmission network was 9,796MW on Wednesday 14 February - well above the 2017 record of 9,412MW.⁶⁷
- Similarly, Queensland’s two distribution networks recorded peak electricity demand as recently as the summer of 2017. Demand in the South East on Energex’s network hit an all-time high of 4,814MW in January 2017. This was followed in regional Queensland by a record system-wide peak on Ergon Energy’s network of 2,637MW in February 2017. The highest peak in demand to occur across the two distribution networks simultaneously reached 7,145MW at 5.50pm on 12 February 2017.
- Hence, while average electricity demand may be forecast to remain flat across the NEM, peak demand remains difficult to forecast and patchy between jurisdictions and grid locations over time. It also continues to place significant pressure on future network peak capacity requirements. Consequently, the linking of

⁶⁶ <https://www.electranet.com.au/wp-content/uploads/projects/2016/11/2018-08-16-SA-to-NSW-interconnector-NSW-Public-forum.pdf>

⁶⁷ ENA website, viewed 10 September 2018. <https://www.energynetworks.com.au/news/energy-insider/qld-sets-demand-record-againand-againand-again>

average declining network utilisation to a need for weaker investment incentives is mistaken and irrelevant to the setting of the rate of return as part of the 2018 RORG Review.

7. The Independent Panel Report

The Independent Panel has appropriately identified the key shortcoming in the draft RORG, questioning whether the draft RORG achieves the NEO, NGO and RPPs

- The draft RORG fails to demonstrate that the draft RORG achieves the NGO, NEO and RPPs.
- In particular, the AER has not adequately assessed cost and risk trade-offs or whether the current and proposed RORG result in a regulated rate of return (net of the value of imputation credits) is too high or too low.
- We support the Independent Panel's commentary on the AER's inconsistent application of when to make a change, and the materiality of the change, as well as the tendency to switch methodologies in exercising judgement.
- We are in strong agreement that international comparators for ERPs are relevant and critical in assessing whether the draft RORG delivers a rate of return that is consistent with prevailing conditions and is sufficient to attract capital.

The Independent Panel has not supported the AER's decision or reasons

- The scope of the Independent Panel's review has been arbitrarily constrained, and has, by design, not provided support for the merit of the AER's conclusions, explanations or outcomes.⁶⁸ As a result, the Independent Panel's report merely identifies whether the conclusions and outcomes have been accompanied by sufficient explanation of reasons and judgement.

This limitation in scope undermines the value that can be placed on the Independent Panel's important review, especially as access to merits and judicial review has been effectively removed. *We agree with the Independent Panel that insufficient explanation has been provided for positions*

- We support the Independent Panel's significant concerns regarding the AER's approach to valuing imputation credits. We agree that the AER has not provided justification for the change in approach or demonstrated how its new approach provides a better estimate and is consistent with the NEO, NGO and RPPs. As outlined earlier, we agree that artificially constraining the estimation of distribution rate to the top 20 firms has not been justified and has not addressed the concerns raised by the NSG, ENA and experts about the need for the firms to be comparable to the BEE.
- We agree that the reasoning for reducing the MRP from 6.5% to 6% is not explained and nor is the AER's views on the appropriate implications of the RFR to the MRP (and therefore, the relevance of forward looking estimates).
- Support the consideration of the underestimation bias in the SLCPM as a model deficiency rather than an equity beta issue.

We do not share the concerns or views outlined by the Independent Panel in relation to the 10-year term and RFR. We consider that it is appropriate to give primacy to predictability and stability in relation to these issues.

⁶⁸ Independent Panel Report p. 5.