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APA submission on rate of return working papers

APA Group (APA) appreciates the opportunity to make submissions on the three draft working papers – *Equity Omnibus*, *Draft Debt Omnibus Paper*, and *Overall rate of return* – which the Australian Energy Regulator (AER) published in July 2021.

Publication of the draft working papers was an important step in the process leading to the 2022 Rate of Return Instrument. In the papers, the AER indicated preferred or proposed preliminary positions on some 37 key issues in rate of return determination. These issues are listed in Table 1 of the paper *Overall rate of return*. Table 1 shows only six issues on which the AER has not taken a position, and is currently seeking views.

APA is a member of the Australian Pipeline and Gas Association (APGA), and has contributed to, and supports, the APGA submission on the draft working papers. The APGA submission addresses each of the issues raised in the working papers. APA's submission – this submission – draws attention to an issue where our focus and emphasis are a little different from those in the APGA submission.

APA is concerned that review of the Rate of Return Instrument seems to be proceeding without addressing recent changes in investor perceptions of the risks of investing in energy infrastructure. In consequence:

- the pricing of carbon transition risk is not currently being recognised in the review of the Rate of Return Instrument;
- [redacted]; and
- if transition risk is not recognised now, there will be no opportunity to recognise it during the period of the revised Rate of Return Instrument, and prices for regulated service provision will not compensate for the costs of financing the assets used in that service provision before 1 January 2027.

[redacted].

always powering ahead

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

- [redacted];
- [redacted];
- [redacted]; and
- [redacted].

[redacted].

[redacted]:

- [redacted];
- [redacted];
- [redacted]; and
- [redacted].

[redacted]

[redacted]

[redacted].

[redacted].

[redacted]:

- [redacted];
- [redacted]; and
- [redacted].

What are the implications of these concerns for the returns to be allowed on the equity and debt of regulated gas transmission pipelines?

1.2. Implications for equity returns

The Australian businesses for which share price data are available for CAPM beta estimation – the AER's comparator set – are listed in Table 1.

Table 1
Comparator set for beta estimation

Firm	Data set
Alinta (AAN)	20 October 2000 to 17 August 2007
AGL (AGL)	29 May 1992 to 6 October 2006
APA Group (APA)	16 June 2000 to TODAY
Ausnet Services (AST)	16 December 2005 to TODAY
DUET Group (DUE)	13 August 2004 to 28 April 2017
Envestra (ENV)	29 August 1997 12 September 2014
GasNet Australia (GAS)	21 December 2001 to 10 November 2006
Hastings Diversified Utilities Fund (HDUF)	17 December 2004 to 23 November 2012
Spark Infrastructure (SKI)	2 March 2007 to TODAY

With the change, which we have noted above, in investor perceptions of risk since 2015, use of the longest available series of share prices for each firm in the comparator set will no longer provide robust and statistically reliable estimates of beta for estimation of the rate of return on equity.

Of the nine firms listed in Table 1, share price data for only four – APA Group, Ausnet Services, DUET Group and Spark Infrastructure – are available after 2014. Only beta estimates made for these four firms might indicate changes in perceptions of risk which incorporate assessments of carbon transition risks. But of the four, shares in DUET Group ceased trading in April 2017. Moreover, Ausnet Services and Spark Infrastructure earn most of their revenues in the electricity sector [redacted]. Only the beta estimate for APA Group is now likely to indicate investor perceptions of risk for gas transmission pipelines.

In changing circumstances, we are left with the share price data for only one firm from which to make a robust and statistically reliable beta estimate for gas transmission pipelines.

In 2018, we were of the view that the addition of foreign firms to the comparator set could increase statistical precision, but only at the cost of biased beta estimates. There was no simple adjustment which might be applied to the data for foreign firms which could make them comparable with data from the extant domestic comparators. The problem might be overcome with use of an international version of the CAPM, but that would raise new and difficult conceptual and data issues. If the set of comparators was to be expanded, then careful consideration should be given to other Australian infrastructure businesses before turning to possible international candidates.

We now doubt the appropriateness of including other Australian infrastructure businesses in the comparator set. While those businesses might be, in some ways, comparable to gas transmission

pipelines, we would not necessarily expect their betas to indicate changes in perceptions of risk which incorporate assessments of carbon transition risks.

If we are to make an estimate of beta which properly reflects the systematic risk of transmission pipelines, then we are left with little choice but to make some use of data from foreign firms. This was a conclusion we reached with our APGA colleagues and, together, we engaged CEG (Competition Economists Group) to estimate a beta for gas pipelines using the comparator set and methods of the New Zealand Commerce Commission. The Commerce Commission comparator set included 16 gas transportation businesses, all domiciled in the United States. Asset beta estimates were made for those nine firms in the comparator set which were listed and trading at 30 June 2021. These estimates were for periods of 5, 10 and 15 years ending 30 June 2021. They are summarised in Table 2.

Table 2
Asset beta estimates for firms in Commerce Commission comparator set

	5 years	**10 years**	**15 years**
All currently listed comparators	0.53	0.48	0.47
Firms trading for at least one year	0.61	0.53	0.51
Firms trading for at least two years	0.54	0.50	0.48
Firms weighted by number of years trading	0.54	0.50	0.48

CEG concluded:

- an asset beta for gas transportation is between 0.47 and 0.61;
- the asset beta is currently above 0.24 (the re-levered asset beta of the current Rate of Return Instrument); and
- the asset beta for gas transportation has been increasing.

Our own estimation of betas for APA has similarly indicated:

- the asset beta is currently above 0.24; and
- the asset beta has increased over the last decade.

However, our current estimate of the asset beta for APA (made using weekly data for the period of 5 years to 30 June 2021) is only 0.35. It is low when compared with the betas CEG has estimated for US comparators.

Neither CEG's estimation of beta, nor our own work leading to an asset beta estimate for APA of 0.35, has considered the effect of stock market uncertainty associated with the Covid-19 pandemic. The pandemic has disrupted national economies, and has affected financial markets:

As the novel coronavirus (COVID-19) spread from a regional crisis in China's Hubei Province to a global pandemic, equities plummeted and market volatility rocketed upward around the world.[1]

When we estimate an asset beta for APA using weekly data for the period of 5 years ending 31 December 2019, effectively removing from the sample data for 2020 and 2021 potentially affected by the pandemic, our estimate is around 0.40. The estimate is higher, and consistent with the pattern of increase in beta over the last decade.

Our view is that use of a sample which includes data potentially affected by the pandemic depresses the estimate of beta. A beta estimate depressed by the effects of the pandemic should not be used in a revised Rate of Return Instrument which does not have effect until 1 January 2023, and which will continue to affect the returns allowed to some regulated pipelines (for example, APA's Amadeus Gas Pipeline, for which the current access arrangement is to be revised by 1 July 2026) until the early 2030s.

Our own estimates for APA, and the estimates for US comparators made by CEG, indicate that an estimate of the asset beta for a regulated Australian gas transmission pipeline should now be above 0.24. It could be as high as 0.40, the estimate we have made for APA after effectively removing from our sample data which may be affected by the Covid-19 pandemic. APA has businesses in other industry segments (predominantly electricity generation), where the risks created by competition may be higher than the risks of owning and operating transmission pipelines. Nevertheless, around 90% of group returns are generated from pipeline operations. We see an asset beta for transmission pipelines as being in the range 0.35 to 0.40.

1.3. Implications for return on debt

The AER's working paper *Draft Debt Omnibus Paper* advises that consideration is now being given to a small number of enhancements to the current method of cost of debt estimation. These enhancements are:

- use of the Energy Industry Credit Spread Index (EICSI) to inform the benchmark rate of return on debt and to better reflect service provider debt costs in the benchmark;
- weighting the trailing average of rates of return on debt by forecast capital expenditure; and
- bringing forward the timing of averaging periods to reduce time pressures on the AER and on service providers.

APA's views on weighting the trailing average by forecast capital expenditure, and on bringing forward the averaging periods, are those in the APGA submission (to which we contributed). Our concerns in this submission are with the broader questions of whether there can now be a benchmark rate of return on debt and, if there can, whether the benchmark can be informed by the EICSI.

[1] Scott R. Baker, Nicholas Bloom, Steven J. Davis, Kyle Kost, Marco Sammon and Tasaneeya Viratyosin (2020), "The Unprecedented Stock Market Reaction to COVID-19", Review of Asset Pricing Studies, 10(4), pages 742-758.

The EICSI was developed as an average of the observed spreads, to the Bank Bill Swap Rate (BBSW), of debt issued by regulated electricity transmission and distribution networks, and by regulated gas transmission pipelines and distribution systems. When calculating the index, the AER does not weight the observed spreads by industry sector, credit rating, size of debt issuance or term to maturity. The index itself is a 12 months rolling average, first calculated in January 2014 (using data from the preceding 12 months), and subsequently recalculated quarterly. The EICSI is a current measure of credit spread. It was originally intended as a "sense check" for assessing the AER's overall approach to estimation of the rate of return on debt, and was not developed for the purpose of determining that rate of return.

In its November 2020 final working paper, *Energy network debt data*, the AER explained why greater reliance might now be placed on the EICSI when estimating the return on debt, and assessed a number of ways in which the index might be used. Use of the EICSI to directly determine the benchmark blend of A and BBB rated bonds was the AER's preferred approach. The weights given to rates on these bonds (sourced from the Reserve bank of Australia, Bloomberg, and Thomson Reuters) in rate of return on debt estimation are currently fixed, in the Rate of Return Instrument, at 1/3 : 2/3. The AER now proposes that, when the rate of return on debt is estimated, these weights be adjusted so that the estimate of obtained matches the cost of debt implied by the EICSI over the last four years. The EICSI would no longer be a sense check; it would be used to determine the rate of return on debt.

One of the reasons given by the AER for a change in the way the EICSI is to be used is that the index currently indicates a cost of issued debt which is below the estimate of the rate of return on debt obtained using the method set out in the Rate of Return Instrument. We note that the AER's consultant, Dr Martin Lally, has advised that the observed outperformance should be further investigated before the method of estimation is changed, and that the AER has commenced this work and is intending to present its findings in a final *Debt Omnibus Paper*.

In our August 2019 submission to the AER on energy network debt data, we advised that we had no confidence in the EICSI as an indicator of debt costs. In a small sample, like the sample which underpins the EICSI, credit spreads will differ, not because service providers fail to expend effort on minimising those spreads, but because the underlying risks of the businesses are different, lender perceptions of those risks (based on specific inquiries by debt providers, supported by the work of the rating agencies) are different, and there are different options available for risk management. With different technologies (electricity transmission, electricity distribution, gas transmission gas and distribution), different scales of operation (electricity distribution businesses are often much larger than gas transmission and distribution businesses), different equity financing arrangements (private, or publicly listed), and different market risks and contracting (regulated and partly implicit contracts with large numbers of end-user in the case of electricity and gas distribution; small numbers of end-users, some directly contracted for pipeline service provision, others contracted with pipeline users themselves directly contracted with pipeline operators, in the case of gas transmission), the credit spreads will be different.

The sample for the EICSI was too small for the index to be a reliable indicator of the cost of debt.

This problem is exacerbated with [redacted] the pricing of carbon transition risks into [redacted] debt offerings [redacted].

Even if the way in which the EICSI is to be used to estimate the rate of return on debt is not invalidated by the investigations the AER is currently undertaking on the recommendation of Dr Lally, the EICSI cannot now be used to determine the rate of return on debt in the 2022 Rate of Return Instrument. Nor can it now be used in the way originally intended, as a sense check.

Ideally, a cost of debt index should be developed for gas transmission pipelines. However, the number of Australian pipeline businesses is small, and any reliance on debt data from foreign pipeline businesses (assuming suitable data from those businesses were available) would encounter problems similar to those which make the use of their share prices in equity beta estimation undesirable.

The best that might realistically be done is to continue the current practice of estimating the rate of return on debt from a large sample of broadly similar debt issues. This may reduce, but will not entirely eliminate, the problem that transmission pipelines are now be more risky than other businesses, and will have to accept credit spreads in the pricing they negotiate for debt higher than those for which they are compensated through the allowed rate of return.

APA would be pleased to elaborate on any of the views in this submission. Our work on rate of return is being undertaken by John Williams, who is in our Perth office and can be contacted directly on [redacted] or at [redacted]

Sincerely,

[redacted]

John L Williams
Regulatory Manager