4 February 2016

Ms Paula Conboy
Chair
Australian Energy Regulator
GPO Box 520
MELBOURNE VIC 3001

BY EMAIL: VICelectricity2016@aer.gov.au

Dear Ms Conboy

Appropriate rate of return for electricity distribution businesses

I have attached a submission lodged by Spark Infrastructure in July 2015 in relation to the regulatory reset process for SA Power Networks.

Spark Infrastructure holds a 49% interest in SA Power Networks and CitiPower and Powercor (together known as Victoria Power Networks) and a 15.01% interest in TransGrid.

The submission contains a range of views expressed by investors in Spark Infrastructure on the issue of Rate of Return and the impact this has on their investment decisions associated with regulated utilities in Australia.

As the contents of this submission apply equally to all regulated utilities in which Spark Infrastructure holds an interest, I would like to submit this again for the AER's consideration in CitiPower's and Powercor's regulatory reset processes in advance of their Final Determinations.

Please feel free to contact me if you would like to discuss the contents of this submission.

Yours faithfully,

Rick Francis
Managing Director and CEO
Spark Infrastructure

3 July 2015

Ms Paula Conboy
Chair
Australian Energy Regulator
GPO Box 520
MELBOURNE VIC 3001

BY EMAIL: SAelectricity2015@aer.gov.au

Dear Ms Conboy

Appropriate rate of return for electricity distribution businesses

Spark Infrastructure is an infrastructure fund listed on the Australian Stock Exchange with a market capitalisation of approximately $2.9 billion. Its current portfolio includes 49% interests in SA Power Networks, CitiPower and Powercor and a 12.4% economic interest in DUET Group. Each of these businesses are subject to regulation by the Australian Energy Regulator (AER).

We are also mandated to consider new opportunities to grow and diversify the portfolio of assets through acquisition. As suitable opportunities arise, we will consider making further investments in electricity and gas network businesses. For this reason the relativities between regulated returns and prevailing equity market rates are a key focus of our attention.

Spark Infrastructure provides an investment vehicle for a wide range of domestic and offshore investors who are largely attracted to the relatively stable and long term nature of both the underlying assets and the returns they have historically delivered. Investors into Spark Infrastructure include superannuation funds, insurance providers, specialist infrastructure investors, private and retail investors and a variety of other long term income investors.

An important part of our work involves maintaining active discussions with a wide range of potential investors, both local and international, primarily for the purposes of supporting future capital expenditure in the network businesses which comprise Spark Infrastructure's investment portfolio. This work provides us with a clear understanding of the prevailing conditions in equity markets and supplements our understanding of the expectations and requirements of our own investor base.

Spark Infrastructure has already communicated its views to the AER in relation to its Rate of Return Guideline issued in 2013 and in relation to its subsequent application in various regulatory decisions, on a number of occasions and in considerable detail. Our concerns in relation to the AER's selection of the Sharpe-Lintner CAPM as its Foundation model with its downwards bias on returns and its dependence on the level of bond rates as a proxy for the risk free rate has not changed. Neither has our view that this does not conform to the Australian Energy Market Commission's rule change of 2011.

As we have previously argued, the combination of parameters proposed by the AER was never likely to deliver a globally competitive return on equity. This is in fact what we are now seeing. The risk free rate has fallen from around 4% at around the time the AER delivered its Final Rate of Return Guideline at the end of 2013 to around 2.5% in February 2015. This is around 340 basis points below the level which prevailed at the time of SA Power Networks regulatory reset in 2010.

We share the frustrations expressed in the submissions of the businesses in which we have invested when they explain how there is a disconnect between the results delivered from the foundation model approach and real equity market movements. The first problem is that the AER foundation model approach has seen a 1 for 1 reduction in the allowed return on equity suggesting a 100% correlation between the risk free rate and the allowed return on equity. This is inconsistent with the empirical evidence which does not support a 1 for 1 relationship.

The second problem is not specific to the current abnormally low interest rate environment. The AER model fails to adequately address the known shortcomings of the SL CAPM which finance theorists have recognised for many years delivers inadequate returns for stocks which have betas below 1. Further, the model performs empirically very poorly. The AER model relies on a single market factor to predict returns and an assumption that investors can borrow and lend at the risk free rate. The assumption is wholly unrealistic because equity market investors such as the parties we have quoted in this submission cannot borrow and lend at the risk free rate and we can confirm from firsthand experience that the SL-CAPM is not a good empirical predictor of equity market returns.

The intention of the AEMC when amending the rules was based on the view that no single model, by itself, can achieve all that is required by the rate of return objective and no one method can be relied upon in isolation to estimate an allowed return on capital that best reflects benchmark efficient financing costs:

> *"The final rule provides the regulator with sufficient discretion on the methodology for estimating the required return on equity and debt components but also requires the consideration of a range of estimation methods, financial models, market data and other information so that the best estimate of the rate of return can be obtained overall that achieves the allowed rate of return objective."*[1]
>
> *"Ultimately it is important to keep in mind that all these financial models are based on certain theoretical assumptions and no one model can be said to provide the right answer."*[2]

For the reasons set out below, we remain deeply concerned that the regulatory returns resulting from the AER's implementation of the SL-CAPM using short term base rates and long run average market risk premium are well below the prevailing market rates.

For the purposes of this submission, our view has been informed by feedback from a broad range of pension funds and other ultimate suppliers of investment funds. Their feedback to us is universally that the regulatory returns currently expected for the next regulatory periods are inadequate to sustain long run decisions to invest in the sector. We have collected their views for this submission. While we have committed to keep their names confidential, we can provide direct quotes from these investors in this

[1] AEMC Rule Determination; p. 8.

[2] AEMC Draft Rule Determination; p. 48.

public document in unattributed form. Many of them have also consented to be identified to the AER in confidence.

Investment timeframe

It is important to understand that the prevailing investment horizon for relevant investors is long-term in character i.e. ten years or more. For example, Investor Comment 1 states the approach in the following terms:

> *"When considering any investment, we typically model out assets for at least 10 years or for concession assets the duration of the remaining concession.*
>
> *For AER regulated utilities, this allows us to capture the current regulatory period as well as any "normalisation" in the returns in the next regulatory period."*

In other words, the AER's proposed regulatory returns and allowances, despite being viewed as 'sub-market' are unlikely to cause any immediate 'fire sale' by existing investors and, indeed, investors are likely to continue to be willing to acquire equity in the short term. However, sub-market regulatory returns will negatively affect asset values by necessitating a 'regulatory risk premium' in the immediate term. Most importantly, if the AER's current approach were to survive appeals and be implemented on a permanent basis, then further supply of equity funds cannot be relied upon.

Alternative investment options

Investors and potential investors in the Australian regulated electricity and gas network sector typically consider a broad range of alternative investment options, both in Australia and internationally. While some investors focus on particular country risk profiles (such as provided by OECD countries), or particular regions (e.g. Asia-Pacific), most potential investors operate on a global scale and which means regulated utilities subject to the AER's jurisdiction are competing with regulated infrastructure businesses across the world.

A typical description of a global portfolio investment strategy is as follows (Investor Comment 2):

> *"We invest in core infrastructure only. This includes concession assets (e.g. toll roads, airports); long term contracted assets (e.g. some pipelines) and regulated utilities.*
>
> *We do not invest in assets that are competitive/exposed to market-based pricing, and in the energy/utilities space, we do not invest in upstream/retail/competitive generation."*

Some funds, however, consider an even broader class of competing investments than the global regulated investment sector. Investor Comment 3 states:

> *"Given the structure of the Fund, we can, and do consider investments across all asset classes including, equities, fixed interest, property, cash and alternatives. The Alternatives Asset Class can include infrastructure and private equity, amongst other assets. This asset class does allow the Fund to invest in regulated assets. Typically the Fund will not invest in assets that have poor earnings visibility, too much regulatory risk and entities that do meet the Fund's required return hurdles or where the return does not adequately reward the Fund for the risk."*

Within the regulated, concession and long-term contract realm, assets identified as competing with AER regulated utilities were numerous and include toll roads, airports, sea ports, oil and gas pipelines and water utilities.

Hurdle rates for investments

Investors determine their required rate of return (or hurdle rate) based on a number of factors including regulatory risk and country specific risk.

Investor Comment 4 describes the standard approach shared by most investors to assessing rates of return:

> *"In general rates of return must be commensurate with the risks that the assets/businesses are taking on. These are in competition with opportunities across the world, not only within the same asset class but across asset classes for the best risk adjusted return."*

Investor Comment 5 explains that even when investors use a CAPM model, it is very different from the AER's foundation model approach:

> *"Investor utilises an internal CAPM model. The risk free rate is important. Investor RFR is very different to the AER view. We do not adopt the spot rate, rather we take a longer term view. 6% used to be the magic number but is now fractionally lower but still well above the AER view."*

In the specific context of considering rates of return for AER regulated utilities, investors stated:

> *"Before making any investment, we consider the equity discount rate / implied return relative to a minimum hurdle rate. …. In the case of Australian energy network assets, we have a detailed CAPM-based discount rate calculation which is subject to a minimum return of our hurdle rate. For example, in the case of SAPN … our return expectations as an investor are still materially higher than the preliminary determination."* (Investor Comment 6)

> *"Hurdle rates are but one of the criteria considered when considering an investment. Other criteria includes regulatory risk, sovereign risk, credit risk and market risk, but to name a few. Of particular importance when considering Australian energy network assets is the projected future CAPEX and OPEX that will be required to maintain the asset. This analysis considers the opportunity cost of not investing the Fund's capital in competing investment opportunities."* (Investor Comment 7)

And again in Investor comment 8:

> *"The current allowed returns being applied by the AER are below what we use as a hurdle rate. Therefore, we assume that over the next regulatory cycles that allowed returns will grow from these historic lows to a level that is more reflective of the cost of capital for these assets."*

Expectation of effect of appeals and future regulatory determinations

Investors made it clear that their consideration of expected returns on AER regulated utilities includes an expectation that appeals by regulated entities will be at least partially successful. Investor Comment 9 addresses this issue stating that:

> *"We expect that appeals for the next regulatory period will be partially successful on allowed returns and some other areas. We model future regulatory periods consistently with the next period."*

Investor Comment 10 identifies concerns specifically in relation to the AER's latest preliminary determination:

> *"We expect that companies in which we invest will appeal regulatory determinations where those determinations are inconsistent with expectations or reasonably expected outcomes. In the case of SAPN's 30 April 2015 preliminary determination from the AER, we view the overall returns from 2015-2020 as being punitive and discouraging of future capital expenditure and equity contributions/cashflow reinvestment. We expect the final to be "better". We do not always expect appeals to yield successful outcomes for business, but in our modelling we do consider whether there is scope for any normalisation or recovery in the next regulatory reset."*

In other words, the investment support we are currently seeing for the sector exists on the assumption that the current below market regulatory returns are a short run aberration over a long run trajectory which is expected to be more favourable.

This is not desirable or in the long run interests of electricity consumers because it necessarily creates expectations of future compensatory over-recovery and more generally a perception that the Australian regulated energy network industry is subject to regulatory risk that must be compensated for in long run levels of return. On the other hand, if expectations of higher future returns are not realised then we will inevitably see capital outflows from the sector.

Comparison of AER regulatory returns to returns available on competing assets

It is clear that investors consider that the returns allowed in the AER's latest determinations are not sufficient to attract equity investment when compared to competing investment opportunities. This is particularly the case given that the allowed returns on equity for similar assets in comparable jurisdictions are significantly higher. For example, Investor comment 11 states:

> *"In some countries - such as Italy, Portugal and Australia - the Allowed ROE is determined based on essentially the spot bond rate at the time of the rate case 10. The UK, in contrast, primarily relies on the average over preceding years. What these countries all have in common is that the Allowed ROE is effectively adjusted by the full amount of bond rate movements.*
>
> *US regulation is unusual in that the Allowed ROE does not adjust to the same magnitude as movements in bond rates. Further, these adjustments are far less formulaic than the other countries, typically being determined on a case by case basis by the relevant utility Commission.*
>
> *Most commonly the Commissions look to determine the appropriate ROE by considering the "cost of capital" of a specified peer group of utilities. This is generally calculated for each company in the peer group by adding its forward dividend yield to its expected growth rate; the latter most typically based on broker forecasts over say the next 5 years".*

And the same investor quotes recent rate case activity as follows[1]:

Country	Nominal ROE	Allowed Equity Risk Premium	Comments
USA	9.76%	7.75%	Average return from State based electric rate cases during 2014
UK	8.1%	6.17%	Based on the outcome of AMP6 regulation of UK water utilities.
Australia	8.3%	5.39%	Average of recent resets and draft of upcoming resets.

[1] Source: Company disclosures, Investor calculations, bond rates as at May 25th 2015

This is corroborated by Investor Comment 12:

> *"Allowed Returns to Equity are lower than the UK (scope for achieving up to the low to mid teens) & US (about 9-10% allowed RoE). The scope for outperformance is less than in the UK (RIIO significantly expanded Totex and other incentive schemes)."*

This is reducing the available pool of investors for AER regulated utilities to draw on in raising equity. It is clear to Spark Infrastructure that a direct result of the AER's implementation of the SL-CAPM using short term base rates and a long run average market risk premium which are well below the prevailing market rates is:

1. A very substantial reduction in the number of global investors willing to consider investment opportunities in AER regulated utilities in Australia; and
2. A significantly reduced focus by Australian based investors on AER regulated utilities in favour of regulated utilities in other jurisdictions.

For example, Investor Comment 13 is representative of the approach now taken by investors with a global focus:

> *"Internally we are spending more time looking at similar assets overseas."*

Implications of the AER's current approach continuing into perpetuity

When asked as to the effect on investment decisions if the AER's approach in its latest distribution determinations continued into perpetuity, it was clear that investors considered that the allowed returns did not provide sufficient incentive to attract investment, when compared to other opportunities.

This is borne out by a number of investors. For example, Investor Comment 14 states:

> *"We would be less likely to invest in Australian energy networks. The mechanical approach being implemented by the AER for allowed returns is overly reliant on spot bond yields, and does not implement the AEMC's rule changes."*

While Investor Comment 15 states:

> *"The current return expectations in the SAPN preliminary determination imply lower future returns for AER regulated assets. But the cost of equity for investors has arguably not changed, so valuations would be partly impaired into perpetuity and this would be considered in the context of any future investment."*

The AER's foundation model approach may appear largely to be a continuity of past regulatory practice but from an investor's view point that model delivers very unstable results because instead of adjusting the rate of return commensurate with prevailing equity market returns the foundation model delivers allowances that vary 1 for 1 according to changes in base interest rates. The volatility of regulatory returns that are inconsistent with equity market returns delivers an unstable investment environment for which equity investors require compensation. Investor Comment 16 states:

> *"We value stability of regulatory process. An unstable, ever-changing regulatory regime requires a discount. Stable regulatory approaches are less risky and therefore worth more, all else equal."*

Summary

The relevant market for equity funds for energy network businesses is a global one that includes competing investments in a range of other countries including, most notably, the US and UK. The current regulatory allowances for equity returns are not commensurate with the prevailing market returns. In particular, the AER foundation model that is overly reliant on spot bond yields, and which delivers returns significantly below 10%, is leading to below market returns which are having an immediate and clear effect on the willingness of investors to contribute equity to AER regulated utilities.

This will inevitably reduce the ability of regulated utilities to maintain sufficient investment in their networks and threaten the long term security of supply. This is clearly inconsistent with the National Electricity Objective to promote efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity.[2]

The information provided to Spark Infrastructure by investors is overwhelmingly consistent with the findings of Balchin & Lawriwsky's report in relation to the expectations of independent experts over recent years:

> *"The return on the market implied by the AER's mechanistic application of the SL-CAPM was materially below the expectations of independent experts late 2012 and early 2013 (when the 'spot' risk free rate was a relatively low 3 per cent to 3.5 per cent), and more recently in late 2014 (when the 'spot' risk free rate again declined to approximately 3.5 percent)."*[3]

Feedback from investors, such as those providing the comments highlighted above, is direct market evidence that should be accorded due weight by the AER.

We would encourage the AER to reconsider the approach and, in particular, broaden the range of theoretical models and move away from a foundation model that is flawed in the ways that we have explained. A number of the other models do not suffer from the flaws that we have identified but each model has strengths and weaknesses and the best result overall can be achieved through using all of the models concurrently.

Please feel free to contact me if you would like to discuss this submission.

Yours faithfully,

Rick Francis
Managing Director and CEO
Spark Infrastructure

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[2] *National Electricity Law*, section 7.

[3] Balchin, J & Lawriwsky, M (Incenta, 2015); *Further update on the required return on equity from Independent expert reports – February 2015*; page 35.