28 October 2013

Mr Warwick Anderson
General Manager—Network Regulation
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

Dear Mr Anderson

Response to Equity Beta Issues Paper

ActewAGL Distribution (ActewAGL) welcomes the opportunity to respond to the AER's Equity Beta Issues Paper (the issues paper). ActewAGL is a member of the Electricity Networks Association (ENA) and has contributed to and supports the ENA's submission on the issues paper.

ActewAGL limits the scope of the current submission to providing comments in relation to the AER's reference to the equity beta expert report from SFG Consulting Pty Ltd (SFG), commissioned by the NSW Idependent Competition and Regulatory Tribunal (IPART) in August 2011, on the Sydney Desalination Plant.

ActewAGL provided regulatory advisory services to ACTEW Corporation (ACTEW) during the water and sewerage regulatory review by the Independent Competition and Regulatory Commission (ICRC) in the ACT during 2012-2013. As part of this review, SFG was engaged to provide advice on an estimate of equity beta for the purposes of setting the regulated rate of return by the ICRC for water and sewerage services.

By way of comparison with its report to IPART, SFG noted in its report to ACTEW of 16 May 2012 that now is published on the ICRC's website as Attachment 15 to the ACTEW submission of 12 April 2013:

> "We have refined the technique used in prior analysis of the Sydney Desalination Plant for the Independent Pricing and Regulatory Tribunal ("IPART") (SFG, 2011). Rather than rely upon monthly returns, we rely upon four-weekly returns and repeat the analysis 20 times with start points at each day of the four-weekly period. This mitigates against estimation error associated with a randomly selected start point. The comparable firm set is the same."[1]

In essence, the expert report that ACTEW relied upon was based on a refined methodology to that relied upon by IPART, which the AER has referred to in the issues paper. ActewAGL would like to address the following issues with the AER's referencing of SFG's August 2011 report:

- Firstly, ActewAGL encourages the AER to review SFG's report to ACTEW as this report is more recent, extending the sample to include more subsequent data, and uses an updated 'four-weekly' methodology that SFG considered more robust and has since continued to use;[2]
- Secondly, SFG's advice to IPART reported that in periods when market returns were below the risk-free rate, the mean Ordinary Least Squares (OLS) beta estimate for an individual firm was 0.69 from a range of 0.42 to 0.97. SFG noted:

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[1] SFG Consulting, *Systematic risk of Actew's water and sewerage business*, 16 May 2012, p 1

[2] SFG's four-weekly methodology "mitigates against [sic] estimation error associated with a randomly selected start point". The four-weekly method is again used in SFG's 24 June 2013 report to the ENA 'Regression based estimates of risk parameters for the benchmark firm'.

"...if the historical returns provide useful information to measure systematic risk exposure, the beta estimate incorporated into the CAPM should have a lower bound determined with respect to the down market beta estimates and associated confidence intervals. This represents a lower bound because, under this scenario, returns exhibit relatively low association with market movements when the market is rising, the very time when investors would prefer returns which are positively associated with market movements.[3]

With gamma at 0.25, IPART adopted an equity beta of 0.6-0.8. This took into consideration the long-term average of all parameter values: the beta, the Market Risk Premium (MRP), and the risk free rate.

Further, comparing beta ranges applied to IPART's determination can be misleading as other elements of IPART's model act to offset potential undercompensation that would occur if the midpoint of the 0.6-0.8 range were to be used in the AER's Sharpe Lintner model. IPART's model produces a range, and recent decisions have opted for a return on equity point estimate at or above the top of the range in the model, due to other compelling evidence that the required return on equity has not fallen in lockstep with the Commonwealth Government bond yield. This means the 'effective beta' applied by IPART is more in the region of 0.8, the top end of IPART's range.

IPART's Draft Report on the Weighted Average Cost of Capital (WACC) methodology, published in September 2013, goes further than the decisions made in 2012 for Sydney Desalination Plant by recognising the stability of the cost of equity over time and giving significant weight to the long-term averages in the model itself, rather than simply using them as a guide or crosscheck.

- Thirdly, IPART's equity beta was in relation to the Sydney Desalination Plant's risk profile. As noted by SFG in its report to ACTEW, "that asset is characterised by contractual terms which transfer considerable risk away from the Sydney Desalination Plant and to the plant operator."[4]

ActewAGL is concerned that the AER has simplified its commentary and omitted to mention the SFG's findings regarding 'down market' estimates of beta. As in its report to IPART, SFG found that water utilities betas were higher in falling markets than in rising markets, exposing investors to greater risk. SFG's updated report for ACTEW, with the refined methodology, showed that:

- the beta estimate for an index in a downward market was 0.78 with a 90% confidence interval of 0.67 to 0.88; and
- the mean of individual firm beta estimates was 0.70 with a 90% confidence interval of 0.49 to 0.91.

ActewAGL is concerned that the AER has not considered the downward equity beta estimates. ActewAGL agrees with SFG that the beta should be set with consideration of the downward market beta estimate.

Finally, ActewAGL would encourage the AER to carefully review the broader material submitted by the ENA in response to the issues paper. The Rules require that AER have regard to a wide range of models and evidence. However, constraints in the AER's current foundation model approach (applying only simple adjustments to the Sharpe Lintner CAPM) mean that the equity beta parameter must be made to reflect much more information than only Australian regression data. For example:

- The dividend growth model estimates calculated by SFG and submitted in July 2013 in response to the consultation paper found the cost of equity for a benchmark firm to be 10.7%, compared with applying the model market-wide for 11.0% cost of equity (ignoring the value of imputation credits).

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[3] SFG Consulting, *Cost of capital parameters for Sydney Desalination Plant*, 10 August 2011, p 5
[4] SFG Consulting, *Systematic risk of Actew's water and sewerage business*, 16 May 2012, p 2

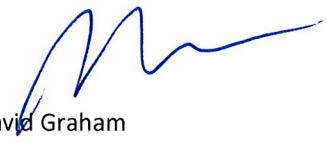
This is forward-looking information which recommends a beta of 0.96 be used in the SL-CAPM to produce an appropriate result.[5]

- Evidence from the theory underpinning the Black CAPM and presented by NERA, as an attachment to the ENA's submission, in June 2013 suggests that the appropriate beta parameter to use is 1.0, accounting for the finding that historical regression-based models have little to no predictive power for estimating the cost of equity.
- US data is more voluminous and can demonstrate the links between NSPs and market-wide risks more precisely than using Australian data alone.

ActewAGL considers that the AER must have regard to information from the Black CAPM, the Dividend Growth Model, United States data and other relevant information when forming a point estimate of beta that will satisfy the rate of return objective in the NER and NGR when used in the foundation model approach. The AER's issues paper is too narrow in its consideration and must have greater regard to these other information sources when making any conclusion on the appropriate equity beta (in the Sharpe Lintner CAPM).

Should you wish to discuss any of the matters raised above please contact Mr Björn Tibell on (02) 6248 3639.

Yours sincerely



David Graham
Director Regulatory Affairs and Pricing

[5] SFG 2013, Dividend discount model estimates of the cost of equity, p29, 19 June 2013.