

26 August 2009



Mr Mike Buckley  
General Manager  
Network Regulation North Branch  
Australian Energy Regulator  
GPO Box 3131  
Canberra ACT 2601

Dear Mike

HEDGING COST SUBMISSION - ENERGEX LIMITED AND ERGON ENERGY CORPORATION LIMITED

Queensland Treasury Corporation (QTC) as the financier to ENERGEX Limited (ENERGEX) and Ergon Energy Corporation Limited (Ergon) welcomes the opportunity to contribute to a submission on the businesses recent regulatory proposals.

ENERGEX and Ergon's regulatory proposals flagged an intention to submit a claim for the cost associated with hedging the interest cost on borrowings undertaken to fund new capital expenditure during the 2010-2015 regulatory period. QTC has provided qualitative and quantitative research to underpin the position that it is prudent for regulated businesses to hedge against fluctuations in interest rates and that compensation for the costs incurred are not already provided for in the regulatory methodology. QTC's analysis and recommendations are attached in the following report.

QTC fully supports the arguments contained in the submissions lodged by ENERGEX and Ergon.

Sincerely

Stephen Rochester  
Chief Executive



QUEENSLAND  
TREASURY  
CORPORATION

# HEDGING COST SUBMISSION

An advisory paper prepared for the Australian Energy Regulator

## INTRODUCTION

In this report we present a case for providing compensation to Ergon Energy and ENERGEX Limited for the cost of hedging the interest rate risk on new borrowings required during the 2010-2015 regulatory period. The volume of new debt is large relative to the current debt balances and, as a consequence, the total interest cost will be heavily influenced by the interest rates paid on these borrowings.

It is prudent for these businesses to hedge fluctuations in interest rates as they have no capacity to adjust prices if higher interest costs are incurred. Although the Australian Energy Regulator (AER) sets the cost of debt based on a spot interest rate, this rate cannot be locked in during the reset period on borrowings that will be made during the regulatory period unless the yield curve is perfectly flat. The cost of hedging is reflected in the margin between the spot and implied forward interest rates. The forward margins exist in addition to normal transaction costs (such as buy/sell spreads) that will be incurred when hedging the existing and new debt. The forward margins are a core component of the actual cost of debt prevailing during the rate reset period.

Compensation for this risk is not provided for by the AER in the proposed equity beta. For beta to capture this risk would require it to be estimated from historical returns of comparable businesses that do not engage in interest rate risk hedging. We present evidence to confirm that the comparator companies do hedge their interest rate risk.

It is reasonable to expect consumers to pay a price based on spot and forward interest rates because they reflect the actual interest costs prevailing during the rate reset period. Ignoring the forward rates will cause prices to be set in a way that makes it impossible for a regulated business to recover the assumed cost of debt. In saying this, it is not proposed that 100% of the future borrowings required during the regulatory period will be hedged, which means that the businesses will still remain exposed to some risk.

## MATERIALITY OF THE INTEREST RISK EXPOSURE

The debt volumes for Ergon Energy and ENERGEX Limited are expected to almost double over the 2010-2015 regulatory period. The interest rates paid on the new borrowings will have a significant impact on the total cost of debt and, ultimately, their net cash flows. Not hedging a large portion of these borrowings will greatly increase the risk of the actual cost of debt exceeding the regulated cost of debt. To highlight the materiality of this risk, changes in the actual cost of debt have been estimated assuming that interest rates rise by 2% during the first year of the regulatory period and remain constant for the remaining 4 years<sup>1</sup>. Based on the forecast borrowing profiles the present value of the additional cost would be approximately ***\$88 million and \$69 million*** for Ergon Energy and ENERGEX Limited respectively.

## HEDGING STRATEGIES

The interest rate risk on future borrowings can be hedged with derivative instruments such as interest rate futures contracts and forward interest rate swaps. When new borrowings will be made over a 5 year period, forward interest rate swaps are suitable hedging instrument, although it may also be possible to lock in the interest rate on a physical borrowing (such as a bond or fixed rate loan) that will be made in the future. Futures contracts on 3 and 10 year Commonwealth Government bonds are only traded for forward periods of up to 3 months and cannot be used to hedge longer dated exposures. The hedging analysis that follows is based on interest rate swap data sourced from Bloomberg as at 14 August 2009.

## THE COST OF HEDGING

The AER's revenue building block model allows a return on capital to compensate for future debt borrowings. Because the return on future debt is based upon prevailing interest rates and credit spreads over a 5-40 day period at the start of the rate reset period, it is prudent for a regulated business to hedge the interest cost on known borrowings at this time. This is especially the case for Ergon Energy and ENERGEX Limited as the amount of new borrowings is relatively large in both dollar terms and as a percentage of existing debt at the start of the regulatory period. When the yield curve is positively sloped, there is a cost (in addition to transaction costs) associated with entering into hedging transactions. The cost is the margin between the spot and implied forward interest rates during the rate reset period.

It is incorrect to apply a spot interest rate to borrowings that will be made in the future. The spot interest rate does not reflect the interest rates that can be locked in during the rate reset period on borrowings that will be required during the regulatory period. The table below displays the spot and implied forward swap rates for a range of forward starting dates. A common maturity date of 14 August 2014 has been assumed for each borrowing to reflect the length of the regulatory period:

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<sup>1</sup> It is assumed that all points on the yield curve increase by the same amount.

Forward Period (Years)	Loan Tenor (Years)	Implied Forward Swap Yield	Implied Forward Margin (pa)
0.00	5.00	5.75%	0.00%
0.25	4.75	5.89%	0.14%
0.50	4.50	6.02%	0.27%
0.75	4.25	6.13%	0.38%
1.00	4.00	6.23%	0.48%
1.25	3.75	6.32%	0.57%
1.50	3.50	6.39%	0.64%
1.75	3.25	6.45%	0.70%
2.00	3.00	6.50%	0.75%
2.25	2.75	6.56%	0.81%
2.50	2.50	6.60%	0.85%
2.75	2.25	6.64%	0.89%
3.00	2.00	6.66%	0.91%
3.25	1.75	6.66%	0.91%
3.50	1.50	6.63%	0.88%
3.75	1.25	6.61%	0.86%
4.00	1.00	6.53%	0.78%
4.25	0.75	6.54%	0.79%
4.50	0.50	6.49%	0.74%
4.75	0.25	6.53%	0.78%

The hedging costs are material and exceed the current 0.08% per annum term premium between 7.37 and 10 year Commonwealth Government bond yields. Based on the forecast borrowing profiles and the above implied forward swap rates the present value of the cost of fully hedging these borrowings is approximately **\$43 million and \$34 million** for Ergon Energy and ENERGEX Limited respectively. These costs are low when compared to the potential increase in interest costs that would arise if the borrowings were not hedged and subsequently made at higher interest rates during the regulatory period.

In practice it would be unlikely for 100% of the expected future borrowings to be hedged. To the extent that some uncertainty exists over the size and/or timing of the borrowings, hedging a portion of the expected borrowing requirement is a more prudent course of action. In addition, borrowings occurring towards the end of the regulatory period may be left unhedged as their impact on the total interest cost over the regulatory period is likely to be small. The actual hedging costs incurred are therefore expected to be less than the figures quoted in this report.

## IS COMPENSATION ALREADY PROVIDED BY THE EQUITY BETA?

The AER notes that changes or volatility in interest rates are a macroeconomic risk factor which affects the systematic or non-diversifiable risk of the business. As such, the equity beta is assumed to compensate for interest rate risk. As the equity beta is estimated empirically from the returns on a sample of comparable companies, it is useful to examine the hedging practices of those particular companies in relation to interest rate risk. If the equity beta is based on historical returns that have been generated by companies which engage in interest rate hedging then it cannot be argued that the equity beta is reflective of interest rate risk. If those companies did not hedge then presumably their historical returns would be riskier, leading to a higher equity beta. This is not to say that the equity beta is too low for entities hedging interest rate risk, but rather that it has (to some extent) already been purged of the effects of interest rate risk.

The following table summarises the interest rate risk hedging practices of the comparator companies sampled by the AER to estimate the equity beta that will determine the cost of equity for Ergon Energy and ENERGEX Limited:

	<i>Comparator</i>	<i>Hedging Practice</i>
1	SP AusNet	Risk Management Policy to hedge 95 per cent of all interest rate exposures using interest rate swaps
2	Envestra	Risk Management Policy requires them to hedge between 80 to 100 per cent of their interest rate exposures
3	CitiPower and Powercor	Typically issue debt at a 10 year maturity and they issue interest rate swaps with terms that reflect a 5 year reset period
4	APA Group	Stated that 66 per cent of all interest rate exposures were either hedged or at fixed rates at year end. Also stated that any floating rate exposures would be swapped out by interest rate swaps.
5	AGL	Stated that long term debt is hedged via interest rate swaps.
6	Duet	States that at year end they had interest rate hedging contacts in place for 95 per cent of outstanding debt commitments.
7	Hastings Diversified	Stated that they utilise interest rate swaps to hedge against floating rate exposures.
8	Spark Infrastructure	Stated that 89 per cent of total debt was hedged at year end.

Source:

- 1 - Standard & Poors RatingsDirect report dated October 6, 2008, (Pge 6)
- 2 - AER submission – Statement by Gregory Damien Meredith (Pge 5)
- 3 - AER submission – Statement by Andrew Noble (Pges 3,4)
- 4 - APA Group Annual Report 2008, (Pge 30, and Note 38 Pge 95-96)
- 5 - AGL Annual Report 2008, (Note 34, Pge91)
- 6 - Duet Group Annual Report 2008, (Pge 7)
- 7 - Hastings Diversified Utilities Fund Annual report 2008, (Note 26, Pge 51)
- 8 – Spark Infrastructure Annual Report 2008, (Pge12)

Providing a definitive answer on which risks are compensated for by the equity beta is an impossible task, however, it is difficult to claim that the interest rate risk is a compensated risk when the equity beta is derived from the historical returns of companies that engage in interest rate hedging for a significant proportion of their exposures. The hedging practices of the comparator companies do not support the argument that Ergon Energy and ENERGEX Limited will be compensated for the interest rate risk associated with new borrowings via the equity beta.

The AER also refers to the pass through nature of borrowing costs for regulated utilities as being a key factor reducing the level of the equity beta for the benchmark NSP (network service provider) relative to a business operating in a non-regulated environment. In its final Review of the weighted average cost of capital (WACC) parameters for electricity transmission and distribution businesses (pp250-251), the AER notes:

*‘...an additional aspect of the regulatory regime is that the cost of debt is based on **prevailing market conditions** as sourced from a reliable data service provider at the time of the determination. The AER considered this ‘pass-through’ nature of borrowing costs was likely to reduce exposure to financial risk, compared to an unregulated business (or the market in general) with the same benchmark level of gearing [emphasis added].’*

In order for a benchmark network services provider (NSP) to effectively pass through its borrowing costs to prices there is the implicit assumption that a benchmark NSP will hedge its interest rate exposure so that its base interest rate is in line with the AER determined risk free rate. However, a benchmark NSP is not only exposed to movements in interest rates on its existing debt. In an

environment where capital expenditure requirements over the 5 year regulatory period constitute a significant portion of the existing regulated asset base, the benchmark NSP is also heavily exposed to movements in interest rates on future borrowings. As such, the pass through assumption should be extended to future borrowing costs otherwise it cannot be argued that the cost of debt is based on 'prevailing market conditions'.

Although the AER has repeatedly specified that hedging *transaction* costs are adequately compensated for by the provision of a 10 year risk free rate versus the average debt portfolio term to maturity of 7.37 years (assuming the yield spread is positive), the forward margins on future borrowings are an additional cost that is not captured in the WACC.

## SHOULD THESE COSTS BE PAID BY CUSTOMERS?

A key regulatory pricing principle is for prices to be set in a way that allows the assumed efficient costs to be recovered. A correctly specified regulated cost of debt should be reflective of the interest rates during the rate reset period for existing and new debt. It is reasonable to expect customers to pay a price that incorporates the forward margins because they form part of total interest cost that exists during the rate reset period. As the forward margins are currently excluded from the regulated cost of debt, the only way for prices to reflect the true cost of debt is by way of an operating expenditure allowance based on the actual hedging costs incurred.

## SUMMARY

Ergon Energy and ENERGEX Limited will require significant new borrowings during the 2010-2015 regulatory period. The interest rates paid on these borrowings will have a large impact on the total cost of debt paid by these businesses. The risk of the actual cost of debt exceeding the regulated cost of debt will be very high unless a significant portion of the interest rate risk is hedged during the rate reset period. The spot interest rate during the rate reset period is not reflective of the forward interest rates that must be paid when hedging the new borrowings. The positive slope of the yield curve will cause the forward interest rates to be higher than the spot interest rate used to determine the regulated cost of debt. The forward margins are a hedging cost that will be incurred *in addition* to normal transaction costs such as buy/sell spreads.

Ergon Energy and ENERGEX Limited are not in the business of taking interest rate risk, nor are they compensated to do so (particularly for the magnitude of the exposure each business faces in the next regulatory period). The companies used to estimate the equity beta do hedge their interest rate risk, and therefore it is difficult to argue that compensation for this risk is provided by the equity beta. The level of risk associated with new borrowings is very high due to the large volumes involved. It is for this reason that hedging is a prudent course of action, especially when neither business has the ability to adjust prices to compensate for higher than expected interest costs. Hedging is also consistent with the AER's view that a regulated business has the ability to 'pass through' its borrowing costs. For this view to hold, the incremental costs associated with locking in the interest rate on new borrowings should be reflected in the regulated price.

It is therefore appropriate that consumers pay these costs because they represent the actual interest costs that exist during the rate reset period. If it is accepted that prices should be set in a way that allows a regulated business to recover their costs, it is reasonable for the cost of the forward margins to be reflected in the regulated price.