ETSA Utilities, CitiPower and
Powercor Australia

JOINT RESPONSE TO

AEMC CONSULTATION NOTICE

ON COST OF DEBT ISSUES

5 July 2012

SUMMARY

In its submission to the Australian Energy Market Commission (**AEMC**) dated 8 June 2012, the Queensland Treasury Corporation (**QTC**) describes an updated moving average approach that it proposes could be used for determining the cost of debt under the National Electricity Rules (**Rules**). The updated QTC proposed approach involves:

- scope for transition to a ten-year moving average approach to determining the risk-free rate and debt risk premium, at the election of the Network Service Provider (NSP);

- where the moving average approach is adopted, a provisional WACC would be calculated at the time of the regulatory determination, with an updated WACC calculated each year based on the moving average approach;

- the length of the moving average period being equal to the tenor of the benchmark corporate bond, which is currently ten years;

- weightings based on the assumption that the NSP refinances existing notional debt on a straight line basis over the moving average period, plus any new notional debt; and

- cost of debt based on the effective interest rate calculated as an internal rate of return (IRR) of all future payments on the NSP notional debt portfolio.

(**QTC proposed approach**)

In this submission, ETSA Utilities, Powercor and CitiPower **(the Businesses)** provide comments on the QTC proposed approach, and respond to the consultation questions posed by the AEMC in its consultation notice dated 21 June 2012.

The Businesses strongly endorse QTC's proposal that a NSP be able to elect to move from the current approach to determining the cost of debt, to an alternative approach such as that which QTC has proposed. The Businesses consider that the QTC proposed approach has the potential to better align regulated revenues with costs, compared with the current approach. However, in response to questions 1, 4 and 5 below the Businesses identify particular aspects of the QTC proposed approach, which have the consequence that QTC's proposal may not be appropriate for all NSPs. It is therefore important that the QTC proposed approach not be imposed on any NSP, and that it only be adopted at the election of a NSP.

The Businesses' response also indicates that for the QTC proposed approach to work effectively, several amendments would need to be made, including:

- determination of the components of the WACC that are updated each year based on the moving average approach should be subject to merits review;

- the Rules would need to specify that the moving average period and term of debt and the risk free rate is ten years;

- there should be no transitional provisions for the debt risk premium;

- the Rules would need to ensure that the efficient costs of hedging for a NSP with a treasury function efficiently sized for the particular NSP would be provided in the building blocks; and

- the moving average approach should not apply to determination of the risk free rate for the purposes of estimating the cost of equity.

The approach previously proposed by the Businesses **(the ETSA/Powercor/CitiPower proposed approach)**, which is summarised at the end of this response, avoids the issues identified above and detailed in this submission and should be considered as an additional option or a replacement for the QTC proposed approach.

Any business operating in a competitive environment will act to minimise its cost of capital[1] to gain competitive advantage. In a regulated environment, the framework for determining the allowed cost of debt is likely to influence a NSP's financing practices and hence its cost of capital. Since the objective of the regulatory framework should be to mimic a competitive environment, an objective of the cost of debt framework should be to minimise the cost of capital of a NSP. This objective means:

- Finding the optimal term of the debt risk premium which affects both the cost of debt and equity. We have previously explained why the optimal term is ten years[2].

- Providing an approach which allows an NSP to find the optimal balance between cost and interest rate risk. In the Businesses' response below we indicate why the Businesses' cost of managing interest rate risk would be higher under the QTC proposed approach compared with the ETSA/Powercor/CitiPower proposed approach.

- Allowing a NSP to elect to select an approach to cost of debt so than a NSP can optimise its cost of capital. Different options may be appropriate for different NSPs due to differences in size, ownership structure and past capital management policies.

The ETSA/Powercor/CitiPower proposed approach reflects financing practices in a competitive environment with a stable revenue stream. The following quote from a listed Australian real estate investment trust (A-REIT) illustrates this:

> *Many Australian Real Estate Investment Trusts (A-REITs) use debt to fund a portion of their property assets. When debt is used to fund higher quality property assets with highly dependable, long-term and growing rental income, the results for investors have tended to be positive.*
>
> *For A-REITs, the average term of hedging is currently about six years. In the vast majority of cases the interest rate that is hedged is the floating nominal base interest rate, or bank bill swap rate (BBSW). This hedging helps to reduce short to medium term volatility in both interest costs and the resulting distributions to investors.[3]*

The QTC proposed approach reflects financing practices in a competitive environment with a revenue stream that is not reset every five years. Either approach might be consistent with financing practice in a competitive environment.

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[1] A business can minimise cost of capital by locking in a more stable operating cash flow e.g. by locking in long term fixed price service contracts or engaging in take-or-pay sales contracts. Therefore, strictly speaking a business will maximise economic profit by optimising the balance between cost of capital and operating profit.

[2] ETSA Utilities, CitiPower and Powercor Australia, *Joint Response to AER and EURCC Rule Change Proposals (ERC0134 / ERC0135)*, 8 December 2011, pp 149-150.

[3] http://www.alegroup.com.au/IRM/Company/ShowPage.aspx?CPID=1422

RESPONSES TO AEMC QUESTIONS

1. As compared to the proposal put forward by the EURCC in the rule change proposal and ETSA/ Citipower/ Powercor's proposal in response to the Directions Paper, what are the advantages and disadvantages of QTC's proposal?

The Businesses consider that the QTC proposed approach has a number of positive features and is superior to the Energy Users Rule Change Committee (**EURCC**) proposal in several respects. In particular, the QTC proposal is appropriately based on a ten-year term to maturity for the debt risk premium, unlike the EURCC proposal which is based on a five-year term to maturity.[4]

However, the QTC proposed approach also gives rise to a number of important issues, which are outlined below. The ETSA/Powercor/CitiPower proposed approach addresses each of these issues and is therefore to be preferred over the QTC proposal.

Annual updating of the WACC would increase uncertainty

Under the QTC proposal, a provisional WACC would be determined as part of each regulatory determination, and an updated WACC would be determined for each year of the regulatory period based on the moving average calculation.[5] There would then be a true-up between the updated and provisional WACC included in allowed revenue for each regulatory year.

Annual revision of the WACC within a regulatory period introduces significant uncertainty for businesses and consumers. Depending on changes in financial market conditions, there could potentially be very significant changes in allowed revenues and prices from what was contained in the regulatory determination. This uncertainty around future revenue allowances could affect the ability of businesses to implement long term capital and operating expenditure programs.

It should also be noted that, without some amendments to the Rules and / or the National Electricity Law (**Law**), it is unlikely that annual determinations of the updated WACC would be subject to merits review. Therefore, and again in the absence of some changes to the Rules or the Law, these annual determinations would not appear to be subject to the same degree of accountability as the determination of the WACC currently is as part of the five-yearly regulatory determination, which is clearly subject to merits review within the bounds of the current Rules and Law.

The Businesses consider that the introduction of a process or annual updating of the WACC would neither promote the national electricity objective nor promote the revenue and pricing principles. By introducing uncertainty through annual updating of the WACC and by removing accountability around this process, the QTC proposal would not promote efficient investment in network infrastructure.

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[4] As previously noted by the Businesses, the analysis underpinning the EURCC proposal for a five-year term is flawed, and the evidence presented by the EURCC in fact supports a ten-year term to maturity for the cost of debt (ETSA Utilities, CitiPower and Powercor Australia, *Joint Response to AER and EURCC Rule Change Proposals (ERC0134 / ERC0135)*, 8 December 2011, pp 149-150).

[5] Queensland Treasury Corporation, *Submission to the AEMC Direction Paper: Economic Regulation of Network Service Providers rule change proposal*, 16 April 2012, Attachment 2.

Applying a trailing risk free rate will increase the cost of managing interest rate risk

Applying a trailing risk free rate will increase interest rate (risk free rate) risk to businesses and increase the costs of managing these risks. These risks will arise in both the transitional[6] and post-transitional periods.

Interest rates are material to the profitability and financial health of a business and can be volatile. Therefore managing interest rate risk is a high priority for any commercial business. Engaging in interest rate swaps is one option for managing interest rate risk that is not unique to the utility sector. A broad cross section of businesses engage in such behaviour, for example, most real estate investment trusts also engage in interest rate swaps.

Under any regulatory approach to determining the cost of debt, there will be a mismatch between the dates on which the regulatory risk free rate is measured and the dates on which actual debt is issued. It is not possible for the Businesses to refinance their entire debt portfolio during the regulatory averaging period (whether it be a 20-day period or one day every quarter as proposed by the QTC) and therefore there is risk of misalignment between the actual interest rate and the regulatory allowance. The Businesses seek to hedge interest rate risk associated with this timing mismatch by issuing floating rate debt and locking in fixed interest rate swaps averaged over the risk-free rate measurement period for both the existing debt and forecast new debt requirements. The Businesses cannot similarly hedge the debt risk premium component of the cost of debt and therefore retain the debt risk premium risk and seek to manage this risk by diversifying the timing of debt issuances and the debt maturity dates.[7]

Under the current regulatory approach where the cost of debt is re-determined every five years, interest rate hedging will need to be undertaken once every five years. The QTC proposed approach makes this type of hedging more costly because, for businesses seeking to efficiently manage interest rate risk, it requires hedging on a quarterly basis compared to once every five years.

Additionally, ten-year swaps are likely to be more expensive than five-year swaps because counter-party risk will be greater. Banks may also require a right to break in the swaps after a shorter tenor, say five years, to manage their credit risk. Under the Business's current treasury policies, only two banks would satisfy the credit-worthiness criteria as a counter party to ten-year swaps. At this stage the availability and cost of ten-year interest rate swaps is unknown to the Businesses.

If the QTC proposed approach were to be implemented the Businesses would have to substantially change their interest rate risk management practices in order to manage the increased interest rate risk that the QTC proposal gives rise to. Private NSPs have relatively

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[6] It is assumed that in practice the transition would apply on a quarterly basis, that is, the weighting of historic rates will increase 2.5% every quarter so that by the 40th quarter (ten years) the transition will be completed. If so, then the average weighting given to historic rates in the first year of the transition will be the average of 2.5%, 5%, 7.5% and 10%. The QTC proposed approach mentions that the weighting in the first year would be 10%.

[7] For further discussion of the Businesses' actual debt financing practices, refer to: ETSA Utilities, CitiPower and Powercor Australia, *Joint Response to AER and EURCC Rule Change Proposals (ERC0134 / ERC0135)*, 8 December 2011, p 138.

small streamlined treasury operations, which are currently not equipped to manage the increased interest rate risk that would be associated with implementation of the QTC proposal. Private NSPs also do not have access to a large government owned Treasury Corporation with the credit backing of a state government and will therefore have more limited access to customised interest rate swaps during the transition period, and long 10-year swaps post the transition period.

The Businesses consider that it would be neither efficient nor in the long term interests of consumers to expose private NSPs to increased interest rate risk and increased interest rate management costs.

The moving average period should be prescribed to be ten years

Under the QTC proposed approach the moving average period is not prescribed. This means that NSPs would face a new risk that the regulatory term to maturity of the cost of debt and hence of the moving average period could be changed.

The Businesses consider that the moving average period should be prescribed to be ten years.

Transitional period is unnecessary for debt risk premium

The Businesses consider that the transitional components of the QTC proposed approach are unnecessary in respect of the debt risk premium. All NSPs are currently exposed to a trailing debt risk premium and therefore there is no need to transition to a trailing debt risk premium allowance.

Applying the QTC transition to debt risk premium will just delay reflection of NSPs actual financing practices and delay allowances for recovery of efficient debt financing costs. As previously noted by the Businesses, there is currently a mismatch between the Rules and NSPs' actual financing practices insofar as the Rules contemplate an entirely forward looking cost of debt, whereas NSPs' actual costs of debt are both backward and forward looking at the time of an AER determination. The transitional component of the QTC proposal exacerbates this mismatch.

Definition of the return on debt should align with actual practice

The Businesses have previously noted that the current definition of the return on debt in the Rules does not reflect NSPs' actual debt financing practices. Similarly, the QTC proposed approach would provide for a return on debt definition which does not reflect actual debt financing practices, thus creating the potential for misalignment between regulatory allowances and the actual cost of debt.

In order to align the definition in the Rules with actual practice, the cost of debt should be defined as the 10-year fixed bank bill swap rate plus debt margin over swap rate.

2. <u>If QTC's proposal was to be implemented, how would such a move affect a NSP's current financing practices? What impact would it have on its risk management practices?</u>

As noted above in response to Question 1, implementation of the QTC proposed approach could result in higher interest rate risk and/or higher costs associated with risk management.

Assuming that a NSP had certainty that the moving average period would be ten years, then instead of engaging in 5-year interest rate swaps immediately prior to a regulatory period under

the current approach, NSPs would engage in 10-year interest rate swaps on the same day the risk free rate is measured each quarter.[8]

Implementation of these additional risk management measures is likely to be more costly than the current risk management measures undertaken by the Businesses.

3. <u>Would QTC's approach reduce the overall level of risk associated with debt financing for NSPs? If so, are there any implications for cost of equity?</u>

The QTC proposed approach may reduce, however will not eliminate, the level of risk in relation to the debt risk premium, by better aligning the cost of debt provisions in the Rules with actual debt financing practices. However as noted above, the QTC proposal may result in increased interest rate risk due to increased counter-party risk and because it may not be feasible to engage in ten year swaps every quarter.

The overall effect on cost of equity is unclear, especially since it is not clear how these factors affect market risk.

4. <u>What changes (if any) should be made to the approach to calculation of the cost of equity if this moving average approach is applied to debt to ensure a consistency of approach?</u>

QTC states that its weighted moving average proposal could be equally applied to the risk free rate used to calculate the cost of equity and that a consistent approach should be applied to the benchmark return on debt and equity.[9]

The AER's application of the current Rules results in a cost of equity for each regulatory determination which combined a long term MRP with a risk free rate measured over a 20-day period. Where conditions in the 20-day period are not reflective of long term average conditions, the cost of equity is unlikely to reflect equity returns required in the market for a similar level of risk. This is a significant shortcoming in the AER's approach under the current Rules, which needs to be addressed.

The QTC moving average cost of equity would be an improvement on the approach currently taken by the AER under the current Rules. However, there are likely to be problems with a moving average cost of equity as proposed by QTC, including:

- it would require prescription of the CAPM theory and model, which may run contrary to the AEMC principles of flexibility and ability to adopt best practice; and

- there may still be a mismatch between market conditions reflected in the long term historical MRP (which is typically based on 50 to 100 years of observations) and a ten year moving average risk free rate.

The Businesses consider that there are more appropriate Rule changes that would allow for a regulatory cost of equity that reflects equity returns required in the market for a similar level of risk. For instance, a Rule change which allowed (but did not mandate) a long term MRP to be combined with a long term risk free rate, but without being prescriptive about the period of the

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[8] In the 10-year transition period there would need to be a pricing window immediately prior to the next two regulatory periods to set the cost of debt for a declining proportion of the total cost of debt.

[9] Queensland Treasury Corporation, *Moving average approach – detailed design issues*, 8 June 2012, p 4.

risk free rate, would be an improvement on the QTC proposal, and a significant improvement on the current Rules.

5. <u>If the moving average approach is adopted, should the average be calculated based on dollar-weighted average of the rates or by calculating the effective interest rate (the IRR of all future payments on the debt) or some other method?</u>

    If a moving average approach is adopted, the average should calculated based on a dollar-weighted average, not based on effective interest rates or internal rates of return (IRR).

    The dollar-weighted average method calculates the interest rate in a particular year whereas, the IRR method calculates the average interest rate over the life of existing debt, so that debt with a longer term to maturity will receive a higher weighting than debt with a shorter term of maturity. The IRR method is not appropriate for regulatory purposes because it calculates an accounting value of interest costs which is not relevant for regulatory purposes. Similarly, it has not been deemed appropriate to use the accounting value of depreciation, tax or operating expense for the regulatory value of the building block cost.

    The Businesses do not calculate interest expense using the IRR method proposed by the QTC.

    The differences between the IRR accounting and actual cost of debt are illustrated in the following example.

    Consider an entity with two $100 loans – one with a maturity of 1 year at an interest cost of 5% and one with a maturity of 10 years with an interest cost of 10%.

    The cash cost over the next year is:

    $100 x 5% + $100 x 10% = $15

    with an average interest rate of $15 / $200 = 7.5%

    The dollar-weighted method calculates the interest rate over the next year to be:

    ($100 / $200) x 5% + ($100 / $200) x 10% = 7.5%

    The dollar-weighted method calculates the actual cash cost of interest.

    The IRR method as proposed by QTC calculates the interest rate over the next year to be:

    ($100 x 5% x 1 + $100 x 10% x 10) / ($100 x 1 + $100 x 10) = 9.55%

    This is significantly different to the cash cost. Additionally, it is unlikely that the NPV of IRR interest costs would equal the NPV of cash interest costs.

    The IRR method proposed by QTC will also result in a difference between the accounting debt balance on which the IRR cost is calculated, and the debt principal on which the actual interest cost is calculated. The difference between the actual cash interest cost and the IRR cost is carried over into the accounting debt balance for the next year. In the above example the accounting debt balance at the start of the next year will be:

    Debt balance at start of current year + actual interest cost – IRR cost =

> $200 + (\$100 \times 5\% + \$100 \times 10\%) - (9.55\% \times \$200) = \$196$
>
> This accounting debt balance is different to the actual debt principal of $200. Therefore, there will be a difference between the notional RAB debt value and the notional accounting debt value.

6. <u>Is the proposal for re-calculating the cost of debt on a quarterly basis reasonable? What other frequency of data points (to the proposed quarterly basis) could be used in calculating the cost of debt and why would this be an improvement?</u>

With respect to interest rate risk management, a quarterly rate is better than applying a daily average. As QTC acknowledges, the frequency of measurement is relevant for the NSP's hedging strategy because, to achieve a close match with its return on debt, the NSP would need to transact interest rate swaps at the same time and frequency.[10] From this perspective, continuous daily calculation would be too difficult.

As noted above in response to Question 1, the QTC proposed approach based on quarterly recalculation will make hedging more costly for businesses seeking to efficiently manage interest rate risk. This is because the QTC proposed approach requires hedging on a quarterly basis compared to once every five years.

If the QTC proposed approach were accommodated in the Rules, the day on which a particular NSP's cost of debt is measured each quarter should be selected by each NSP to avoid all NSPs setting interest rate hedges on the same dates.

7. <u>Should this approach be an option under the rules? If so, should the regulator or the NSP have the discretion to exercise the option and why?</u>

If the QTC proposed approach is to be reflected in the Rules, it should be an option which may be exercised by the NSP. The QTC proposal, if it is to be implemented by the AEMC in some form, should not be mandated in the Rules, nor should the AER be able to impose it upon an NSP.

Different NSPs will engage in different financing practices, depending on their size, ownership structure and past capital management policies. As noted above in response to Question 1 and in the Businesses' previous submissions, the financing and risk management practices currently engaged in by the Businesses differ from what is contemplated by the existing Rules and from what is contemplated by the QTC proposal. The Rules should not impose a particular financing structure which may not be efficient for all NSPs.

Codification of the QTC proposed approach in the Rules, with no option for an NSP to adopt a different approach, would not promote the national electricity objective or the revenue and pricing principles. For reasons set out in response to Question 1, this would:

- materially alter the risk exposure of shareholders of some NSPs; and

- increase the cost to some NSPs of managing these risks through interest rate hedging.

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[10] Queensland Treasury Corporation, *Moving average approach – detailed design issues*, 8 June 2012, p 3.

For similar reasons, it should not be within the AER's discretion to impose such an approach to measuring the cost of debt. Creating discretion for the AER to do this would increase uncertainty for NSPs around future cost of debt allowances, which could create a disincentive to invest.

Rather, the Rules should specify the broad options available and criteria against which the AER should assess whether to accept an NSP's proposed option. It should be open to the NSP to propose the cost of methodology that is most appropriate for its circumstances, out of the options available under the Rules. Clearly the NSP will be best placed to do this given its knowledge of its financing needs and practices.

The Rules should accommodate the following options:

- the current approach, which is entirely forward-looking;

- a forward looking risk free rate and historic/prevailing debt risk premium (ETSA/Powercor/CitiPower proposed approach summarised below); and

- a moving average cost of debt (QTC proposed approach).

THE ETSA/POWERCOR/CITIPOWER PROPOSED APPROACH

For reasons set out in previous submissions, the approach to determining cost of debt preferred by the Businesses is:

- Cost of debt defined as the 5-year bank bill swap rate plus debt margin over swap rate;

- 5-year bank bill swap rate determined in a nominated measurement period close to the final regulatory determination;

- Debt margin is determined in the regulatory determination as a weighted average of each debt margin determined for each relevant historical year and the debt margin determined in the nominated measurement period. All new and refinanced debt in the regulatory period will receive the debt margin determined in the nominated measurement period;

- Require the AER to provide compensation for other debt costs not captured in secondary traded bond yields if the debt margin is determined by reference to secondary traded bond yields; and

- No transition period required since all NSPs are currently exposed to an historical debt margin.

(**ETSA/Powercor/CitiPower proposed approach**)

This approach is described in more detail in the Businesses previous submissions to the AEMC consultation process.[11]

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[11] ETSA Utilities, CitiPower and Powercor Australia, *Joint Response to AER and EURCC Rule Change Proposals (ERC0134 / ERC0135)*, 8 December 2011, pp 152-155.