power to you

18 Brodie Hall Drive
Technology Park
Bentley WA 6102
PO Box 1066 Bentley DC WA 6983
Telephone (08) 6310 1000
Facsimile (08) 6310 1010
www.horizonpower.com.au

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Dr Duc Vo
Senior Analyst
Economic Regulation Authority
PO Box 8469
PERTH BC WA 6849

By email to: publicsubmissions@erawa.com.au

Dear Dr Vo

Re: Estimating the Debt Risk Premium

Horizon Power appreciates this opportunity to provide comment on the Economic Regulation Authority's (the Authority's) discussion paper "Measuring the Debt Risk Premium: A Bond Yield Approach"[1] (the Discussion Paper). Given the Authority's intention to utilise the debt risk premium determined from this review in its Inquiry into the Funding of Horizon Power (the Inquiry), Horizon Power is a major stakeholder and will be directly affected by this determination.

A number of questions have been posed by the Authority in the Discussion Paper. These questions address specific matters relating to the determination of the debt risk premium, but fail to consider the context of the premium and how this affects its determination. Further, no rationale is provided for the Authority's separate consideration of the debt risk premium at this late stage in the Inquiry process. In this response Horizon Power identifies significant concerns with the process adopted by the Authority to determine WACC for the Inquiry. We also address the set of questions posed by the Authority in the Discussion Paper.

Horizon Power has retained Dr John Fallon of Economic Insights Pty Ltd (Economic Insights) to provide specialist advice to the business during the Inquiry. Dr Fallon is a leading specialist in regulatory economics. Economic Insights has prepared a separate report for Horizon Power for its submission to the Discussion Paper consultation[2]. Their report should be read in conjunction with the high level comments provided by Horizon Power.

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[1] Economic Regulation Authority (2010), *Measuring the Debt Risk Premium: A Bond-Yield Approach*, 1 December at 10.

[2] Economic Insights (2011), *Measuring the Debt Risk Premium for Regulated Utilities, Report prepared for Horizon Power Pty Ltd*, January 6.

Determination of the Horizon Power WACC

Horizon Power draws to the Authority's attention our concern with the process adopted by the Authority to consider WACC for the Inquiry. In particular, we view it as unusual to consider an element of WACC in isolation. Consistent with processes adopted to set price caps (such as the Maximum Reserve Capacity Price) in the State's Wholesale Electricity Market and the process for the Western Power Access Arrangement, we view that WACC should be considered in its entirety as a core part of the Inquiry process.

The Discussion Paper focuses purely on the debt risk premium, but in reality decisions about the debt risk premium cannot be completely isolated from decisions about other cost of capital parameters, particularly the market risk premium and the measure of systematic risk used in calculating the cost of equity. These interrelationships become increasingly evident following periods of significant turmoil in financial markets, as has recently been evidenced by the Global Financial Crisis (the GFC). In such times the consideration of elements of WACC in isolation is likely to result in some parameters being based on recent and volatile results while others are based on longer term historical information.

The adoption of the Western Power WACC with minor modifications for the debt risk premium diminishes the value of the Authority's analysis during the Inquiry and may lead to an outcome that is inconsistent with Horizon Power's operational requirements and economic efficiency considerations. Horizon Power views that this matter is of sufficient importance to require a comprehensive review by the Authority of the Horizon Power WACC.

Horizon Power also draws to the Authority's attention the detailed rationale that has already been provided to the Authority refuting the application of the Western Power WACC to the Inquiry. Key characteristics which differentiate the two businesses, impacting the cost of capital and driving a divergent WACC outcome include:

- Horizon Power is much smaller, serving approximately 43,000 customers versus approximately 900,000 customers for Western Power;
- Horizon Power owns and manages a vertically integrated supply chain, conducting transmission, distribution and retail activities and generation. In contrast Western Power focuses on transmission and distribution services only. It operates and maintains the South West Interconnected System which is a network of transmission and distribution infrastructure in the South West of Western Australia;
- The Horizon Power network is fragmented (not interconnected) with low customer density;
- Much of Horizon Power's service area is remote, serving communities in harsh climates, ranging from deserts to tropical locations;
- Horizon Power faces input prices (for labour and materials) that are generally higher and likely to be more volatile;
- Horizon Power faces customer growth rates that are generally more volatile; and
- Horizon Power is overwhelmingly more reliant on uncertain government funding than Western Power to support a cost base that is also more variable.

Upon consideration of these issues, it is clear that Horizon Power faces substantially more risk than Western Power as a reflection of the scope for variability in the business's returns as well as the risk of outright default of the returns. The application of the CAPM model that underlies the selection of the cost of capital parameters only recognises the diversifiable risk and is valid only to the extent that its underlying assumptions hold. Therefore in differentiating between the Horizon Power and Western Power risk structures, it is the non-diversifiable risks which are critical as well as the validity of the

underlying assumptions for the CAPM. In this regard from an assessment of the above business characteristics we identify that:

- There is a reasonable likelihood that Horizon Power's non-diversifiable equity risk is higher than those of Western Power in a conventional application of the CAPM; and
- The operation of the Uniform Tariff Policy and the zero economic profit requirements embodied in the Tariff Equalisation Fund legislation will constrain Horizon Power's upside potential however there is still significant downside risk for Horizon Power. That is, Horizon Power cannot derive profits greater than those calculated at a zero economic profit but may experience costs that it, in effect, cannot expect to be compensated for. This is not contemplated within the CAPM model, which assumes that there is a symmetric equal opportunity for both upside and downside potential. This imbalance between upside and downside potential should be adjusted for by way of a premium for asymmetric risk in Horizon Power's allowable WACC.

These and other rationales as to why the Western Power WACC is not appropriate for the Inquiry are considered in the submission by Economic Insights[3]. We request full consideration of these matters by the Authority.

Question 1

Is the Authority's proposed approach of estimating the debt risk premium likely to better reflect the prevailing conditions in the market for funds than the use of Bloomberg's estimates of fair yield curves?

Horizon Power ***does not*** believe that the approach put forward by the Authority is likely to better reflect the prevailing conditions in the market for funds than that achieved by the Bloomberg estimate of fair yields (the Bloomberg approach).

The Bloomberg approach is well designed to ensure bond prices are reliable estimates.[4] Bloomberg achieves this by only utilising prices (indicative and executable) for bonds that have a high level of liquidity and removing observations that are considered to be outliers (i.e. bonds with prices either significantly higher or lower than for comparable bonds). Bloomberg then applies statistical techniques to estimate a "best fit" curve to the portfolio of "reliable bonds", building the curve up based on the observations for the bonds at various maturities and for various credit ratings.[5] It is considered that such an approach, together with its application by one of the leading providers of financial information in the world, enables a more reliable prediction of the fair yield for a bond of a specific credit rating and specific period than the approach put forward by the Authority which simply obtains an average across a range of maturities without adequate adjustment for variation of the risk premium with maturity dates.

Horizon Power views the work undertaken by Economic Insights as well supported and highly persuasive and recommends its detailed consideration by the Authority.

Horizon Power highlights to the Authority that the Bloomberg data:

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[3] Economic Insights Op Cit at 19-21

[4] Lee, M., (2007), *Bloomberg Fair Value Market Curves*, International Bond Market Conference, Taipei; Synergies (2010), *Developing the Approach to Estimating the Debt Margin*, Submission in Response to IPART Discussion Paper, December

[5] Lee Op Cit.

- Is produced by an independent, expert provider of financial information with no interest in the outcomes of regulatory decisions with respect to market premiums. We view this independence and expertise as appropriate in the regulatory context;
- Ensures that the existence (or lack of) liquidity in individual bond markets is reflected in the price applied at each maturity date; and
- Provides specific estimates for specific maturity dates, recognising that bond yields vary with maturity dates.

While Horizon Power appreciates that the Authority's approach may give rise to a larger sample size (although in this case only 15 bonds are captured) and this aspect ought to be more statistically robust than the Bloomberg approach (reflecting the reduction in the standard error), we view that this benefit is lost through the application of an average price over all maturities, and potentially "mis-represent[s] the market risk premium for a 5 year pricing period when the typical yield curve has an upward sloping and typically non-linear pattern"[6].

However, as noted by Economic Insights[7] there is one important qualification in relation to the issue of liquidity and that is that if a regulated entity has characteristics that mean that its bonds would be relatively illiquid, then there would be a need to allow for an illiquidity premium in the cost of debt. But if illiquidity is a factor (as it would be for Horizon Power) that needs to be explicitly recognised by deriving a separate estimate for an illiquidity premium, otherwise the reliability of the base estimate for liquid bonds would be compromised.

Question 2

Is the use of a benchmark sample of Australian corporate bonds with a term shorter than 10 years likely to better reflect the prevailing conditions in the market for funds than the use of Bloomberg's estimates of fair yield curves to derive a 10 year term?

Horizon Power acknowledges Bloomberg's decision not to publish 10 year fair yield curves, however it will be publishing 5 year and 7 year yield curves for BBB rated bonds. Consistent with the advice received from our advisers and indeed with the approach that has already been adopted in the Western Australian marketplace, Horizon Power views that the simplest approach to obtaining a 10 year estimate (in the absence of the preferred Bloomberg data) would be to extrapolate the 7 year yield to 10 years based on the difference between the 5 year and 7 year yields. For confirmation of reliability of the outputs of this process, we recommend that the Authority cross checks the estimates against the data inputs and fair yield curve outputs used by Bloomberg.

As identified in our response to question 1, while we view that some shortcomings remain with this approach, it is likely to provide estimates which more closely correlate to the previous Bloomberg 10 year yield curves than the Authority's proposed simple averaging approach, which averages over various maturities from 2 years, with the average maturity being about 5 years.

We highlight to the Authority that this matter was considered by Market Participants within the State's Wholesale Electricity Market (the WEM) in October last year. At that time, the Allen Consulting Group provided an update of a number of minor WACC

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[6] Economic Insights Op Cit at 12
[7] Economic Insights Op Cit at 8

parameters as part of the annual process to set the Maximum Reserve Capacity Price[8]. Allen Consulting recommended the linear extrapolation of the BBB seven year yield as described above, to give a debt risk premium of 5.19 per cent as of 26 October 2010.

In further support of our proposed approach we refer the Authority to the submission by Economic Insights[9].

Question 3

Is the Authority's proposed approach to the selection of Australian corporate bonds appropriate?

Horizon Power has identified two key concerns with regard to the Authority's proposed approach to the selection of Australian corporate bonds.

We identified in our response to question 1 the concern that while the Bloomberg approach adequately addressed the issue of outliers within the yield data, the Authority's approach makes no such adjustment. Those bonds whose prices are either significantly higher or lower than comparable bonds remain within the data set, having the potential to skew the set to an artificially low or high outcome. In addition Bloomberg only selects liquid bonds and it is not clear the extent to which the Authority's sample contains liquid observations.

The Authority[10] also implies that its sample is sufficiently large enough to provide a reliable estimate of the debt risk premium. However, the Authority has published no evidence in support of this.

There is also a critical issue of the relevance of the sample and a BBB credit rating for Horizon Power. As explained by Economic Insights[11] there is a strong case that Horizon Power, when considered separately from its owner, has a much lower credit rating then BBB. An issue that the Authority needs to consider fully is whether benchmarks relevant to Horizon Power could issue BBB bonds in Australia. It is suggested that this issue needs to be investigated further for Horizon Power as it is not appropriate from a benchmarking or economic efficiency perspective to use a 'one size fits all' approach when there are genuine cost differences for Horizon Power that it cannot reasonably control.

Horizon Power therefore seeks confirmation from the Authority that the WACC for Horizon Power will also incorporate a premium to reflect the illiquid nature of bonds that would be relevant benchmarks for Horizon Power.

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[8] Allen Consulting Group (2010), *Update of WACC Minor Parameters: For the Purpose of Determining the Maximum Reserve Capacity Price,* Report to the Independent Market Operator, October.

[9] Economic Insights Op Cit

[11] Economic Insights Op Cit at 20.

Question 4

Which method for calculating the weighted average of observed yields from the sample should be used?

Consistent with Horizon Power's previous comments, we view the Authority's proposed methodology is deficient in recognising the variability of the debt risk premium over different maturities. The adoption of Horizon Power's preferred approach is to obtain the 10 year estimate (in the absence of the preferred Bloomberg data) by extrapolating the 7 year yield to 10 years based on the difference between the 5 year and 7 year yields. As we have identified in our response to question 2, this approach remains consistent with approaches adopted within the State's Wholesale Electricity Market.

Question 5

Are there any relevant sources of information that the Authority has not considered in this discussion paper with regard to estimating the debt risk premium?

Horizon Power again highlights its contention that the current market conditions should be reflected consistently in all parameters of WACC, necessitating a comprehensive, consistent and concurrent review of all WACC parameters to inform the Horizon Power Inquiry. It is not reasonable to develop and apply a methodology for the debt risk premium in isolation from consideration of other parameter in setting an allowable rate of return.

In particular we highlight the specific risk associated with undervaluing the market risk premium (as a component of the cost of equity), which continues to be based on the long term historical data and is very likely to have been adversely impacted by the short term impacts of the GFC. This is particularly an issue where the risk free rate and the debt risk premium adopted by the Authority reflect current and more "market representative" data. This view is also held by our advisers[12].

Horizon Power is mandated to act as a commercial organisation by its enabling legislation[13]. As a prudent commercial organisation, Horizon Power has commissioned its own independent advice with regard to various aspects of WACC to be applied in the Inquiry. The advice received relating to the debt risk premium has been provided in the separate report prepared for Horizon Power for this consultation by Economic Insights[14]. Horizon Power requests that the Authority give due consideration to the full range of matters raised within that advice.

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[12] Economic Insights Op Cit at 12-17
[13] The Electricity Corporations Act (2005) WA
[14] Economic Insights Op Cit

Concluding Comments

Horizon Power is available to discuss any matter raised in this submission directly with the Authority. We look forward to working with the Authority to ensure that the Inquiry delivers an outcome that supports Horizon Power's requirements as a commercial organisation and its role as the energy provider for regional and remote Western Australia. We highlight that without sufficient funding the business will be unable to sustain the delivery of its broad-ranging obligations.

Regards

DAVID TOVEY
ACTING GENERAL MANAGER
GOVERNANCE AND COMPANY SECRETARIAT