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

Our Ref: DM 3368309

Sara O'Connor
Analyst
Economic Regulation Authority
PO Box 8469
PERTH Business Centre
PERTH WA 6849

By email to: publicsubmissions@erawa.com.au

28 January 2011

Dear Sara

HORIZON POWER'S SUBMISSION TO THE INQUIRY INTO THE FUNDING ARRANGEMENTS OF HORIZON POWER

Horizon Power is pleased to have the opportunity to respond to the Draft Report of the Economic Regulation Authority's (the Authority) Inquiry into the Funding Arrangements of Horizon Power.[1]

Horizon Power engaged with the Inquiry in a manner that was both open and constructive, using the Inquiry as an opportunity to develop transparency around the business' operations and to form an understanding of how a regulator might apply regulatory principles through which the business' operations could be assessed for effectiveness and efficiency.

Horizon Power commends the Authority's References and Research team on the substantial volume of work that was completed in a short period of time. Throughout the course of the Inquiry, Horizon Power provided in excess of 1,500 documents to the Inquiry, as well as detailed financial, energy and demand data for 34 systems. This required the Authority's staff to address the Horizon Power business model, reformat, validate and analyse the data, all within the period of a few months.

As a result of the Inquiry, Horizon Power developed some significant new learnings about its business. In particular, by working with Parsons Brinckerhoff and the Authority, the business has been:

- Able to form a view of the business's requirements to be financially sustainable, including appropriate funding, asset valuation and Weighted Average Cost of Capital (WACC);
- Educated as to the process of a Regulatory Inquiry and the underlying process and data requirements;

[1] Economic Regulation Authority (2010)a, *"Inquiry Into the Funding Arrangements of Horizon Power: Draft Report"*, 18 December.

- Provided the opportunity to undertake a review of the qualitative aspects of Horizon Power data and its information systems;
- Provided the opportunity to review its operations through an economic regulatory lens;
- Provided insights into best practice demand and energy forecasting, project estimating and budgeting techniques;
- Provided the opportunity to re-evaluate the business's approach to cost escalation and the application of overheads across the business; and
- Subject to an independent due diligence review of past business decisions, reinforcing the progress Horizon Power has made in terms of strengthening its approach to decision making.

The Parsons Brinckerhoff Report

Horizon Power's positive engagement throughout the Inquiry has been affirmed by Parsons Brinckerhoff:

> "… [A]s a general comment, in regards to discussions and information exchange, PB found that Horizon Power was highly cooperative in regards to access to appropriate staff, information and documents. They presented a well-organised and professional business that appears to have adopted sound practices and processes in a number of the areas tested. Furthermore, their documentation and strategic intent/approach appears well considered, focussed strongly on a culture of continuous improvement since its inception in 2006."[2]

Horizon Power in turn thanks Parsons Brinckerhoff for the quality and depth of its engagement in developing an understanding of the business through the formulation of their report. The consultant pursued an intensive interview process with Horizon Power staff as well as the collection and review of the core Inquiry documentation.[3] Parsons Brinckerhoff focussed on the approach taken by Horizon Power to establish its forecasts, the performance against historical budgets, material expenditure and budget components[4] and the business's policies, strategies, processes and asset management practices.

Of key importance to the Inquiry, Parsons Brinckerhoff sought to genuinely understand how a vertically integrated energy business serves a sparsely populated and geographically dispersed customer-base. Further, Parsons Brinckerhoff displayed an understanding of how the business's external governance, commercial and regulatory arrangements influence the way the business might demonstrate the efficiency of its operations. As highlighted in Horizon Power's submission to the Authority's Issues Paper,[5] an understanding of this context and Horizon Power's service mandate is an essential pre-requisite to the conduct of this Inquiry.

---

[2] Parsons Brinckerhoff (2010), "*Inquiry into Funding Arrangements of Horizon Power – Operating and Capital Expenditure Review"* 8 October

[3] As identified above, this included in excess of 1,500 documents, including Fact Sheets, written responses to specific questions, Horizon Power reports, business cases, and a wide array of internal documentation. The business also provided a range of financial data to Parsons Brinckerhoff.

[4] When assessed in terms of their function (generation, transmission, distribution, retail) geographic location and the overall customer base.

[5] Horizon Power (2010), "*Submission to the ERA Issues Paper*", July, at 2-15.

Horizon Power identifies its concern that the Authority has set aside many of Parsons Brinckerhoff's key findings with little apparent substantiation or justification. We view this as a matter of some significance, given Parsons Brinckerhoff was appointed as the Authority's expert adviser for the Inquiry and that the Authority did not attend the onsite interviews or review much of the technical materials provided to Parsons Brinckerhoff. Horizon Power views that a limited consideration of matters associated with the Parsons Brinckerhoff review has led the Authority to form an incomplete view of the substance of the Parsons Brinckerhoff Report. Horizon Power provides specific examples of instances where in Horizon Power's view the Authority has perhaps misinterpreted Parsons Brinckerhoff's findings, within the main body of this submission. By way of example we identify the following points:

- Horizon Power provided significant justification by way of documents (including independent advice) and in face to face discussions with Parsons Brinckerhoff in support of the application of the Building Cost Index (BCI) for the escalation of its materials and capital works budgets. This led to Parsons Brinckerhoff being supportive of Horizon Power's choice of escalator. The Authority has however opted to adopt CPI as it relates to consumer related products in metropolitan Australia; and

- Horizon Power worked closely with Parsons Brinckerhoff to communicate the evolution of the business, and advise where the business was within its life cycle of setting up a viable, independent and efficient standalone business. This led to Parsons Brinckerhoff noting in their report that "PB concludes that historical opex levels are in line with expectations of a company undergoing the establishment and restructuring phase that Horizon Power has undergone within the past four years. However PB would expect that ***eventually*** [emphasis added] increases in opex should cease and then start to decrease as the company realises efficiencies."[6] Horizon Power views that the Authority has inferred from these comments that Horizon Power has reached its consolidation phase and should immediately be subject to aggressive efficiency targets. This is an incorrect view of where Horizon Power is within its life cycle. Parsons Brinckerhoff acknowledges in their report the significant projects under way to establish the business and to deliver efficiencies (which are reflected in reduced operating budgets post 2013). A failure to fund and complete these tasks will constrain the business's ability to deliver against its mandate and provide efficiencies in the future.

Horizon Power therefore appreciates the opportunity to engage directly with the Authority during, and subsequent to, this consultation period. By maintaining such open and constructive dialogue Horizon Power believes an agreed view of Horizon Power's business can be developed, with the Authority's resulting proposal being consistent with the business's long term sustainability.

Terms of Reference

Horizon Power also draws to the Authority's attention the Terms of Reference for the Inquiry. The Terms of Reference require the Authority to consider and develop findings on the cost reflective retail tariffs that would apply to Horizon Power's service area for the period 2009/10 to 2013/14, for the purposes of determining the efficient expenditures required to supply customers on regulated retail tariffs located in these areas. This will inform the setting of the amount of the Tariff Equalisation Contribution, which will be determined by Government. The Authority was also

[6] Economic Regulation Authority (2010)a Op Cit at 86

asked to consider and incorporate incentives for Horizon Power to develop and implement efficiency measures, such as gain sharing mechanisms between customers and Horizon Power. In undertaking the Inquiry the Authority was also asked to assess the efficiency of Horizon Power's procurement processes and operating and capital expenditure programmes.[7]

While Horizon Power acknowledges the Authority's additional obligations to have regard to Section 26 of the *Economic Regulation Act (2003) WA*, we highlight that the Terms of Reference do not include consideration of the mechanism to be applied to derive Horizon Power's required funding, nor do they require a view of the appropriateness of the current funding mechanism or the efficiency of the mechanisms of Government to be considered by the Authority in determining Horizon Power's efficiency. Horizon Power strongly contends that the business's efficient costs are those that arise as a result of the business operating its existing asset portfolio within its current governance, commercial and regulatory environment. In particular we identify to the Authority the business's concern that the Authority has excluded from the cost base an item of expenditure (temporary generation at South Hedland) with the apparent rationale that taxpayers should not cover costs resulting from the deliberations and approval processes of Government. Such processes, while outside the business's control, are core to Horizon Power's management and oversight as a Government-owned entity. Any comment or exclusion on the basis of a view by the Authority of the efficiency of these processes is outside the Terms of Reference for the Inquiry.

We also take this opportunity to again highlight that Horizon Power is not a fully regulated business with the sole purpose of providing network infrastructure services. As identified in Horizon Power's submission to the Issues Paper, Horizon Power is an integrated corporatised entity, providing generation, retail, transmission and distribution services with a range of potentially conflicting purposes set by Government.[8] The business "operates within a Performance Bargain which loosely links its mandate and service delivery standards to funding.

As a commercially focussed, Government owned business engaged in the delivery of essential services and broader Government policy objectives, Horizon Power is acutely aware of the requirement to deliver its services in a manner which balances a range of competing needs. Such needs include:

- Compliance with legislative, regulatory and Government policy obligations;
- Safe delivery of reliable energy supply for customers;
- Cost efficient energy solutions for Government;
- Effective stewardship of the business's assets over their lifecycle, ensuring that they are fit to meet current and future operating needs and that investment is economically efficient over the long term;
- Ensuring an adequate and consistent return to the Shareholder for current and sunk investments;
- Continuing to meet commercial obligations to maximise Horizon Power's long run financial position (consistent with legislative obligations) within funding constraints; and
- Critically, the Horizon Power Board's obligation to meet its fiduciary obligations.

[7] Economic Regulation Authority (2010)b, "*Inquiry Into the Funding Arrangements of Horizon Power: Issues Paper",* 3 June, at vii.
[8] Horizon Power (2010) Op cit at 1,2

The business operates in accordance with its Strategic Development Plan (SDP), agreed and approved with the Minister for Energy and concurred with the Treasurer through the State Budget process. The SDP process endorses the mandate and strategic direction for the business and performance targets which underpin Horizon Power's Business Plan".[9] Horizon Power manages its assets to a full (100%) safety and regulatory compliance standard. It is this broad mandate, strategic direction and performance targets which must be taken into account when setting the business's efficient expenditures.[10]

Within this submission Horizon Power identifies several key deficiencies with the Authority's allocations for efficient expenditures which will significantly impact the business' ability to deliver its Government agreed mandate. In particular we note:

Business Establishment and Lifecycle Considerations:

- Failure to recognise that Horizon Power is a relatively young organisation and has not reached its consolidation phase within its lifecycle. This impacts the efficient level of costs required to complete establishment tasks[11];

Financial Sustainability:

- The Authority has not adequately considered the age and state of the asset base inherited by Horizon Power at disaggregation. This impacts the appropriate level of efficient costs specified for the business. Further, prior to disaggregation the business was subject to an historical lack of reinvestment in its asset base, leading to a substantial requirement to re-invest in the assets to meet safety, compliance, security and reliability of supply obligations[12];
- The credibility of a Regulatory Asset Base of $264.1 m as of 30 June 2009 can be questioned when the interest bearing liabilities of Horizon Power were $646.2 m in 2010[13] and it is unlikely that deprecation charges have led to recovery of the cost of capital prior to disaggregation';
- Return on, and of, capital has been determined on a Regulatory Asset Base and with a proposed Weighted Average Cost of Capital (WACC) with which Horizon Power disagrees, particularly as there appears to be an inconsistent application of regulatory practices. Horizon Power identifies a DORC valuation for its networks asset base alone is in the vicinity of $880 million as opposed to the Authority's valuation of $244 million[14];
- The escalators applied by the Authority are not reflective of higher costs experienced in regional areas of Western Australia compared with Perth nor the growth in the business's anticipated future costs[15];

[9] Horizon Power (2010) Op Cit at 5. Electricity Corporations Act (WA) 2005 at Sections 51 and 51.
[10] Horizon Power (2010) Op Cit at 25.
[11] This matter is further considered in Section A, Recommendation 4 of this submission.
[12] This matter is further considered in Section A, Recommendation 2 of this submission.
[13] This includes lease liabilities. Horizon Power notes that in the Authority's view of the asset base these leased assets have been removed.
[14] As at 30/6/2009 in 2009$. This matter is further considered in Section A Recommendation 2 of this submission.
[15] This matter is further considered in Section A Recommendation 5 of this submission.

- Proposed withdrawal of funding for defined major projects determined by Horizon Power as necessary to meet safety, load and reliability requirements (both capital and operating). These include the Wood Pole Replacement, ENRUP, Karratha to Roebourne 22 kV line, Dampier to Roebourne 22 kV line and Fairway Drive substation[16];

Efficiency Targets

- Proposed efficiency targets commence from a base year that is not representative of Horizon Power's stable operating requirements[17];

Shareholder Returns and Funding:

- Proposed efficiency targets are not aligned with Horizon Power's agreed mandate with Government. The delivery of the aggressive targets put forward by the Authority would result in the business being insufficiently funded and unable to deliver its Asset Management Plan to its existing standards for compliance, safety and regulatory, capacity, reliability, quality and asset service. Further the business may find itself in the position of having to delay key major projects which address business establishment and/or efficiency objectives;[18] and
- In general, an insufficient level of funding to allow the business to be sustainable over the medium to long term (as evidenced by an ever increasing level of debt and no returns payable to the Shareholder) and to invest in its assets to meet reliability and sustainability of supply obligations[19].

Horizon Power highlights that a failure to allow sufficient funding to cover Horizon Power's reasonable expectation of its cost exposures will require Government to supplement Horizon Power's level of aggregate funding (potentially out of consolidated revenues) if the business is to be able to deliver against its endorsed mandate. Horizon Power views this eventuality as contrary to Government's policy intent when the Tariff Equalisation Contribution fund (the TEC) was established and we note that no such request for supplementary funding has been contemplated within the business's budgetary forecasts.

Next Steps

Horizon Power identifies that a considerable amount of regulatory judgement has been required by the Authority in developing its modelling and compiling its Draft Report. The Authority has been required to develop an Initial Capital Base (ICB), an appropriate base year for the efficient operating and maintenance costs, as well as a reasonable target for improvements in operations and maintenance productivity (the efficiency target) over the Inquiry period. The Authority has also been required (with the assistance of Parsons Brinckerhoff) to review and approve investment plans and make judgements about their reasonableness. All of this been has done without the benefit of adequate statistical benchmarking studies as these have been either unavailable or inappropriate to apply to Horizon Power's business model and service

[16] This matter is further considered in Section A Recommendation 6 of this submission.
[17] This matter is further considered in Section A Recommendation 4 of this submission.
[18] This matter is further considered in section A Recommendation 4 of this submission.
[19] This matter is further considered in Section A Recommendation 2 and 4 of this submission.

area. The Authority has also been required to determine an allowed rate of return, a compatible valuation of the rate base (capital stock) going forward and appropriate depreciation rates. In the absence of a regulatory accounting system for Horizon Power, the Authority has had to make determinations about gifted and contributed assets and the commencement of new capital.

Horizon Power has previously noted the extremely tight timeframe in which this Inquiry has been undertaken and the exceptional manner in which the References and Research team has acquitted itself. We note that as a reflection of the requirements for analysis and regulatory judgement, the Authority's report is in a very early draft form and that there remain a set of key matters which require the Authority's consideration. These include:

- The Regulatory Asset Base should be the subject of more comprehensive consideration, including whether the asset base should be based on historic cost, indexed historic cost or Depreciated Optimised Replacement Cost (DORC) and to what extent the valuation complies with the requirements of Financial Capital Maintenance which is important for ensuring economically efficient investment;[20]

- The determination of an appropriate WACC for Horizon Power. Horizon Power has previously provided information on the appropriateness of various elements of WACC and within this submission provides further information to the Authority. We also note that the Authority continues to separately consult on the Debt Risk Premium to be applied;[21]

- The absence of pre-determined business viability criteria for Horizon Power. Analysis is yet to be undertaken on appropriate credit criteria, the outcome of which will impact forecast gearing ratios and interest calculations. The absence of such criteria is evident in the outcomes of the Authority's modelling that show a deteriorating Balance Sheet over the Inquiry period with no allowance for repayment of debt or any dividend return to Government. We note the need for Financial Capital Maintenance and the need for consistency between the gearing assumptions to be applied in WACC and those within Horizon Power's own forecast capital structure;[22]

- The amendments to asset lives to reflect Horizon Power's depreciable useful lives at the asset class level, the outcome of which will impact return of capital (depreciation)[23];

- The version of the report as issued does not incorporate Horizon Power's approved Demand and Energy Forecast, but rather an earlier version;[24]

- Horizon Power has put forward a major a proposal for the approval of Government for the provision of adequate power supplies in the Pilbara. A

[20] Horizon Power considers this matter further in Section A Recommendation 2 of this submission.

[21] Horizon Power considers this matter further in Section A Recommendation 7 of this submission. Horizon Power has provided a submission on debt risk premium, refer Horizon Power (2011), "*Estimating the Debt Risk Premium"*, January 7. The Horizon Power submission was further supported by views from Economic Insights Pty Ltd. See Economic Insights (2011), *Measuring the Debt Risk Premium for Regulated Utilities, Report Prepared for Horizon Power Pty Ltd"*, January 6.

[22] Horizon Power considers this matter further in Section A Recommendation 7 of this submission.

[23] Horizon Power considers this matter further in Section A Recommendation 2 and 7 of this submission.

[24] Horizon Power considers this matter further in Section B of this submission.

decision by Government to accept or reject this proposal will have major implications for the Authority's modelling of the business capital and operating expenditure profiles. An outcome is expected from Government during the drafting of the Authority's Final Report;[25]

- Several events have now occurred post the issue of the Draft Report which materially impact the required capital and operating spends. These include the recent confirmation of the disconnection of the Rio Tinto transmission assets in the Pilbara and the announcement by the Water Corporation of its 6GL Desalination Plant on the Burrup Peninsula; and[26]

- The recent flooding in and around the town of Carnarvon has highlighted the benefits in emergency response time and service delivery arising from Horizon Power's decentralised operating model and the emergency management capability that is inherent in positioning senior management accountability in regional locations.

Submission Structure

In its submission, Horizon Power addresses a range of issues raised in the Authority's report that in Horizon Power's view are based on an incomplete and in some cases inaccurate view of the business and its physical, political and commercial operating environment.

Horizon Power also addresses the impact of external cost-drivers in the period post disaggregation, the volatility of demand in Horizon Power's supply areas and the cost of doing business in regional Western Australia.

This submission is provided in five parts, including this letter, two attachments (SECTIONS A and B) and two sets of appendices (one confidential and one public). SECTION A, will address the draft recommendations as these have the potential to most significantly impact on the business' ability to execute its strategy and to continue to meet its regulatory and legislative supply, service and safety obligations. SECTION B, will detail in tabular form a raft of secondary issues that, in Horizon Power's view, the Authority has either misunderstood or misrepresented in the draft report. The appendices provide supporting materials with the Confidential Appendices being not for publication and only for the consideration of the Authority.

Concluding Comments

Horizon Power understands that the Authority's report is in draft format. We therefore appreciate the opportunity to continue to work with the Authority to develop a sustainable view of Horizon Power. This should include the development of an Initial Capital Base (ICB); an appropriate measure of escalation; an appropriate base year for the efficient operating and maintenance costs; a reasonable target for improvements in operations and maintenance productivity (the efficiency target); the appropriateness of certain capital investment plans; determination of an allowed rate of return; a compatible valuation of the rate base (capital stock) going forward; the approach to treating gifted and contributed assets; and the commencement of new capital.

[25] Horizon Power considers this matter further in Section B of this submission.
[26] Horizon Power considers this matter further in Section A Recommendation 6 of this submission.

Horizon Power looks forward to demonstrating the ongoing effectiveness and efficiency of its operations as the Inquiry reaches its natural conclusion.

Yours sincerely

DAVID TOVEY
ACTING GENERAL MANAGER
GOVERNANCE & COMPANY SECRETARIAT

SECTION A

The draft recommendations:

1. **The service level standards for Horizon Power be retained, unchanged from their existing form, for the Inquiry period.**

Horizon Power's service level standards are not set by a regulatory funding framework but through legislation and an agreed Performance Bargain with the Minister for Energy, endorsed by the Treasurer through the development of the Strategic Development Plan each year. The importance of the setting of the Performance Bargain should not be underestimated as there is a direct relationship between service standards and cost.

The Performance Bargain specifies service standards in exchange for Horizon Power's agreed funding.

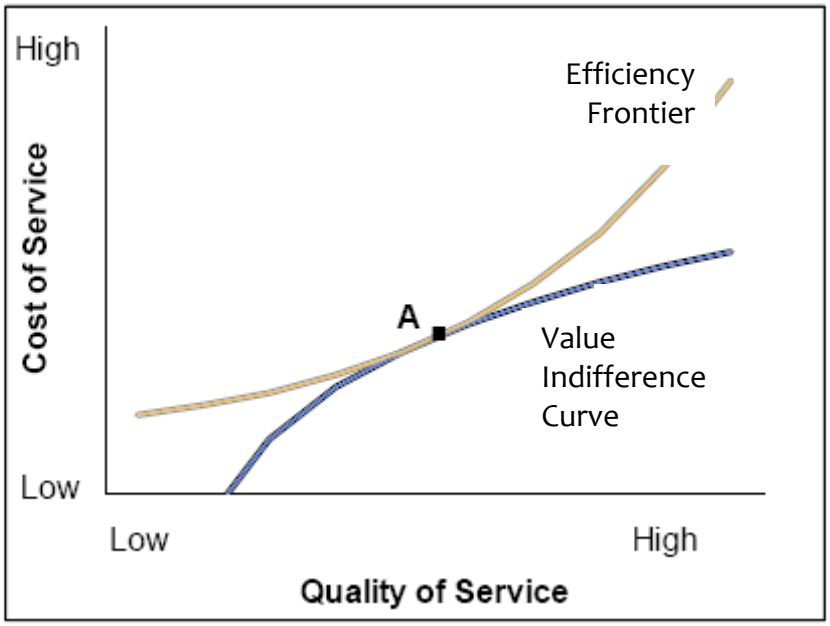
The service standards within the Performance Bargain have a number of dimensions, including:

- The quality of electricity supplied (in terms of voltage, harmonics and other characteristics);
- The quality of customer service (in terms of response to enquiries, requests for connections etc, decentralised service delivery model);
- The reliability of supply;
- Capacity in the business to support Government's needs and expand the service area in full or in respect to delivery of regularised utilities services to indigenous communities(ARCPSP);
- Capacity in the business to be able to deal with the on the ground consequences of cyclonic weather conditions, exercise step in rights with Independent Power Producers (IPPs) and maintain commercial leverage in negotiations with IPPs; and
- Capacity in the business to integrate new technologies to drive down the cost of supply.

In developing the Performance Bargain there is a tacit acknowledgment of the relationship between the cost of supplying electricity and the quality of the service (whether measured in terms of reliability, quality or customer service). As shown in the efficiency frontier below, higher quality of services comes at a higher cost. All points on the curve represent best practice - they are all efficient in that each point represents the minimum cost at which a given level of quality can currently be achieved. Any point above the frontier is uneconomical, and the points below it are unachievable with current technology.[27]

The diagram below also shows an example of an aggregate value indifference curve for a community (system). It represents the preferences of customers between electricity price and reliability. All points along the curve represent the maximum cost customers are willing to pay for a certain standard of service. Therefore at any point along the curve the customers (in aggregate) have the same level of utility and have no preference of one cost/quality mix over another.

[27] This type of analysis was adopted by the Office of the Tasmanian Energy Regulator. Refer to Draft Position Paper : Service Incentive Scheme of May 2007



When the two curves are superimposed, the point where the customers' value indifference curve and the efficiency frontier is tangent represents the cost/quality combination with the highest possible utility given the present technology.

Horizon Power highlights that technological advances will allow the business, over time, to move its efficiency frontier down and to the right since the same quality of service can then be delivered at a lower cost. By advancing high technology projects such as the Marble Bar and Nullagine Power Stations, Horizon Power has attempted to test the technology threshold currently constraining its efficiency frontier. Commercialising new technologies will, over time, reduce the cost of supply in regional and remote areas.

As part of the Inquiry, the Authority, through the use of Parsons Brinckerhoff, reviewed Horizon Power's efficient costs of supply. Horizon Power understands that neither the Authority nor Parsons Brinckerhoff reviewed the broader Performance Bargain to which the costs relate, nor was an assessment undertaken of the efficient cost to provide a number of different levels of service. If such an assessment had been undertaken, it would be possible for the Authority to estimate the efficiency frontier, both for the business's entire service area as well as for various districts within that service area. This would have provided valuable input into discussions about future cost reflective tariffs in regional and remote Western Australia, in comparison to various service standards.

Critically, Horizon Power identifies to the Authority that the business has differing efficiency frontiers across its districts and systems arising from the fact that some areas are more costly to supply than others. Given that a significant proportion of the business's customers face the same tariff under the Uniform Tariff Policy, the inevitable consequence is that a profit maximising commercial organisation would provide varying service standards (including reliability) from area to area. This is clearly not a socially equitable outcome and something that Horizon Power manages with careful consideration when balancing its economic efficiency objectives with its social objectives.

Horizon Power highlights that funding for Horizon Power's Asset Management Plan is not guaranteed, but dependent on Government's view of the priority of Horizon

Power's funding request in the context of broader Government funding needs, thereby leading to uncertainty around long-term funding. From an efficiency perspective, this uncertainty of funding may mean that Horizon Power is driven to take a short-term view of the total works program, rather than being empowered to always optimise over the longer term, and that these circumstances also have a flow on impact on decisions relating to resource planning (including labour utilisation).

Horizon Power also has significant concerns with regard to the approach adopted by the Authority with regards to the Efficiency Target. The business views that in the short term, the efficiency savings proposed by the Authority are not achievable and to meet funding shortfalls the business will be driven to cut necessary operating expenditures with an associated deterioration of the services and service level standards provided by the business. These matters are further outlined in response to Recommendation 4.

The Inquiry has focussed limited attention on the appropriateness of Horizon Power's Performance Bargain and thus service standards. Horizon Power accepts the recommendation that standards should remain unchanged at this point in time but highlights the difficulties in achieving them on a uniform basis given the mismatch between costs and funding.

Horizon Power accepts the recommendation that performance standards should remain unchanged.

2. **A historic cost valuation of $264.1 million (in real prices as at 30/6/2009) be used for Horizon Power's initial capital base as at 1 July 2009.**

Issues of Financial Capital Maintenance and the business's ability to sustain itself sufficient to acquit its mandate over the longer term, are not given due consideration within the Authority's report.

The Initial Capital Base determined by the Authority for the Draft Report does not reflect a value consistent with Financial Capital Maintenance. In Horizon Power's view, and consistent with discussions held between Horizon Power and the Authority's Reference and Research Team, the Initial Capital Base calculated at Indexed Depreciated Historical Cost (based on inappropriate depreciation provisions) sets an implausibly low value for the Initial Capital Base with a Replacement Cost valuation of assets (as provided by Horizon Power) setting a plausible upper limit.

The application of Financial Capital Maintenance would see the Initial Capital Base based on Indexed Depreciated Historic Cost since the expenditure was made, but with deprecation charges calculated based only on what depreciation was recovered from revenues. If standard accounting charges are applied but not reflected in revenues the business's assets are in effect being written off and Financial Capital Maintenance is not achieved. The application of Financial Capital Maintenance would see the assets valued in a way that ensures both a return on and return of capital consistent with sustaining investment in commercial environment.

Valuation Methodology

Horizon Power requests it be noted in the Authority's Final Report that while no definitive proposal was put forward in Horizon Power's submission to the Issues Paper on the preferred approach to valuing the Regulatory Asset Base, the business did invite the Authority to engage with Horizon Power to develop an approach which would deliver a Sustainable Revenue Requirement sufficient to acquit its mandate.[28]

Horizon Power has previously identified to the Authority that "as a competitively neutral commercial business Horizon Power is expected to pay tax and recover its cost of capital. On this basis, Horizon Power *must be funded to achieve at least an economic profit of zero*. This should provide Horizon Power with a cash surplus [or funding arrangements] to enable the business to manage risks and accommodate variations between budgeted and actual expenditures within each Tariff Equalisation Fund determination period. However, Horizon Power also acknowledges the State's significant sunk investments in remote and regional electricity infrastructure. Prior to the implementation of the Energy Reform Programme, many of these investments were made by means of debt and equity investments by Governments. Horizon Power views it as appropriate that *Horizon Power's Sustainable Revenue Requirement be set at a level which will allow Horizon Power, and in turn the State, to recover a market rate of return on its investments."*[29] *To ensure competitive*

[28] Horizon Power (2010) Op cit at 16.
[29] Horizon Power (2010) Op Cit at 22.

neutrality and economic efficiency it is also important that Horizon Power recover a return of capital through appropriate depreciation charges.

Consistent with Horizon Power's comments in its response to the Issues Paper, Horizon Power again highlights that the business is currently not subject to the full revenue regulation of many of its counterparts.[30] We view this as a reflection of the relative infancy of the State's energy reforms, the integrated nature of Horizon Power and the fact that most of Horizon Power's customers have access to the Uniform Tariff Policy. As such, Horizon Power has to date not been required to undertake regulatory asset valuations. While the extremely short timeframe allocated for the Inquiry did not allow the business to provide detailed Depreciated Optimised Replacement Cost (DORC) valuations at an individual asset level, *replacement cost valuations were provided for the Non Interconnected System[31] and pre-existing, high level DORC valuations were provided for the NWIS.[32]*

These valuations were discussed on several occasions with the References and Research team and *it was Horizon Power's expectation that the results of the Authority's modelling, reflecting these current cost valuations, would be presented as part of the Draft Report.*

Horizon Power also identified to the Authority, both within its submission to the Issues Paper[33] and in face to face meetings, *the requirement for the principles of Financial Capital Maintenance to be upheld*. It is Horizon Power's belief that *the principles of Financial Capital Maintenance and the selection of an appropriate valuation approach for the Regulatory Asset Base are inextricably linked.*

A failure to consider appropriate current valuations of Horizon Power's asset base, and whether or not financial capital maintenance has been achieved when determining the business's Sustainable Revenue Requirement, is a material deficiency in the Authority's analysis as it will compromise the objective of economic efficiency.

Concerns with the Authority's Indexed Historical Cost Approach

In calculating Horizon Power's Regulatory Asset Base[34] the Authority adopted an Indexed Historic Cost approach, taking the value of the asset base at the point of disaggregation from Western Power (1 April 2006) and rolling forward this value by adding its view of efficient new capital expenditures (net of disposals and depreciation) to give a closing asset value as at 30 June 2009. The closing value for each year was also inflated by CPI to give an opening value for the following year.[35]

Horizon Power acknowledges that the Indexed Historical Cost approach is an accepted approach to establishing a Regulatory Asset Base (in certain circumstances) and given the limited time available to the Inquiry, this was a logical starting point for the asset valuation. However, this approach is also known to have the potential to impair Financial Capital Maintenance if the starting point valuation is not consistent with that principle.

---

[30] Including Western Power.
[31] Sinclair Knight Mertz, (2010), *"2009 Horizon Power Asset Valuation of the North West Interconnected System"* 17 April.
[32] Sinclair Knight Mertz, (2010), "*Horizon Power Replacement Cost Determination for the Non-Interconnected System Network Assets"*
[33] Horizon Power (2010) Op Cit at 22.
[34] Economic Regulation Authority (2010)a Op Cit at 39
[35] Ibid at 40

This concern was highlighted in Horizon Power's submission to the Issues Paper.[36] Critically, for the asset values to underpin a sustainable business which has sufficient reserves to reinvest in, and maintain, assets in a manner which is consistent with the Horizon Power mandate, the starting point valuation as of 1 April 2006 would also have needed to be based on Indexed Historic Cost over the time frame since the relevant capital expenditures within the asset base were incurred. Appropriate return of capital, by way of a depreciation charge, would also have needed to be incorporated in the actual revenue recovery. Under the Uniform Tariff Policy, which is an historic pillar of energy policy in this State, customers in rural and remote Western Australia have not been subject to cost reflective electricity pricing. As such the recovery of an appropriate return on, and of, capital for the associated assets has not previously been achievable.

Further, as Horizon Power highlighted in its submission to the Authority, the asset data that the business inherited at disaggregation was not comprehensive and there is no evidence to support that Indexed Historic Cost was applied consistently prior to the disaggregation, particularly given the large variation between the Indexed Historical Cost and DORC valuations recently obtained.[37] A review of the outcomes of the Authority's modelling leads Horizon Power to believe that the Authority has not strictly applied the principles of Indexed Historic Cost and Financial Capital Maintenance to the asset values at their commencement (or purchase date), but rather has commenced the indexation and depreciation from 1 April 2006, when Horizon Power acquired the assets effectively at their Written Down Value.

What is clear to Horizon Power, and has also been discussed at length with the Authority, is that at the point of disaggregation the business brought over no reserves, by way of cash or accumulated depreciation, associated with each asset. This highlights that the starting point Indexed Historic Cost valuation, at the time of disaggregation (1 April 2006), is likely to have been too low to comply with the principle of Financial Capital Maintenance.

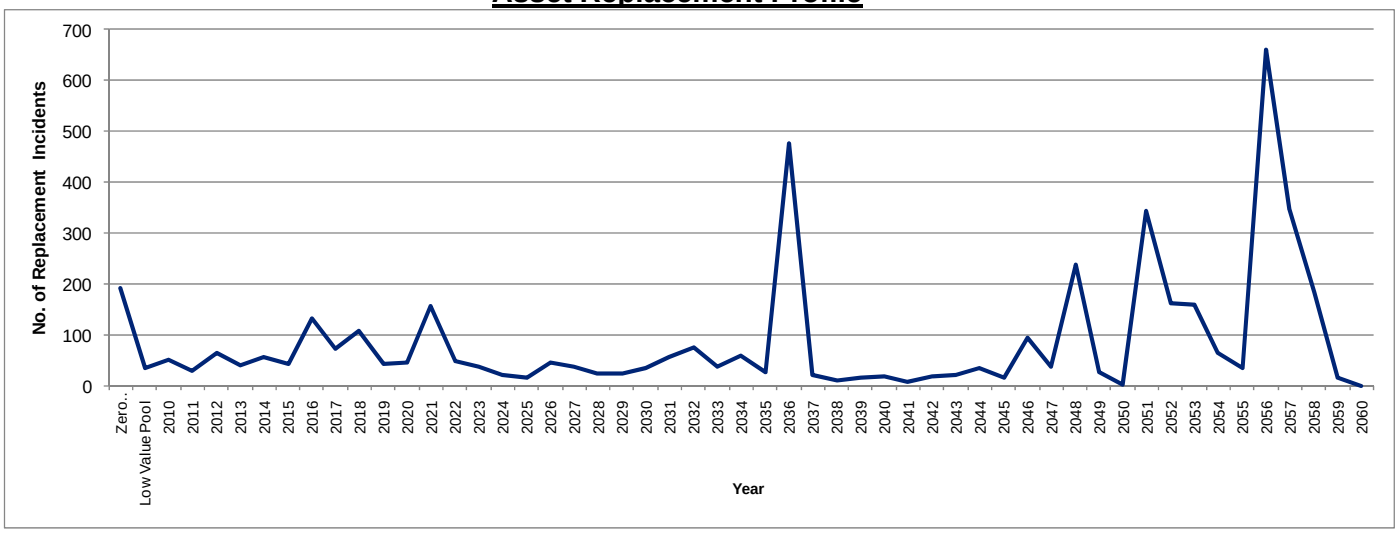
Further, by recovering sub-cost reflective revenues prior to disaggregation the former Western Power Corporation did not have the benefit of additional revenues to reinvest in the asset base, resulting in insufficient funding to meet the standards of service desired by regional and remote Western Australians. This resulted in poor reliability and security of supply and was a key driver for Horizon Power being established with a central focus on regional and remote energy provision.

At its inception in 2006, had Horizon Power been required to replace its asset base, it would not have been able to do so. This remains the case. From the perspective of stewardship of assets, this is clearly an unacceptable outcome. As shown in the diagram below, Horizon Power identifies that the business will be required to replace an ever increasing value of assets as its portfolio of assets continues to age. This is a necessary part of the infrastructure renewal process, and something that has been well recognised in other jurisdictions[38]. The issue to be addressed by the State and Policy Makers, is how this will be funded. The under-recovery of capital that has occurred to date has in effect been funded by a combination of debt and the Tariff Equalisation Contribution (which in turn has been funded by network charges levied on Western Power's wholesale distribution customers). From Horizon Power's

[36] Horizon Power (2010) Op Cit at 19
[37] Ibid at 26
[38] Allen Consulting Group (2003), "Funding Urban Public Infrastructure", Report for the Property Council of Australia, August.

perspective, *the key issue with such an approach to funding, in the context of an aging portfolio of assets and no financial reserves, is in ensuring a credible long term commitment to fund future efficient capital expenditure while ensuring that its customers are not subject to a price shock when substantial asset reinvestment requirements occur.*

Asset Replacement Profile



Note: Extracted from Horizon Power's accounting asset data.[39]

The establishment of asset values consistent with Financial Capital Maintenance would provide Horizon Power with funding that would contribute to its capacity to operate as a sustainable commercial entity.

The poor state of the Horizon Power Balance Sheet, which has a debt to equity ratio in the vicinity of 85:15, is a testament to the inadequacy of the revenue arrangements for Horizon Power. However, this capital structure is also based on an asset value in Horizon Power's statutory accounts that is more than three times the Authority's proposed allowable Initial Capital Base.[40]

Thus Horizon Power suggests that it is difficult to find credible support for the Balance Sheet arising from the Authority's analysis. In particular, the Authority's estimate of an allowable Initial Capital Base of $264.1 million as of 30 June 2009 is well below the interest bearing liabilities that the Authority recognises for Horizon Power of $646.2 million in 2010.[41] These numbers, together with the substantial reliance of Horizon Power on subsidies, raise the issue of the relevance of the commercial benchmarks and the approach to funding that has been proposed by the Authority. Horizon Power has had substantive discussions with the Authority regarding the business's current financial structure and the needs of a financially sustainable organisation. We note that benchmark organisations have debt to equity ratios converging on 60:40 and that this figure was utilised by the Authority in setting the benchmark capital structure for the purposes of the determination of the WACC for the Inquiry. *Horizon Power does not consider that the Authority should raise the*

[39] The number of replacement incidents as shown on the left hand axis does not indicate the value of assets to be replaced.

[40] This includes lease liabilities. Horizon Power notes that in the Authority's view of the asset base these leased assets have been removed. However, an assessment of the business's capital structure would consider such assets and liabilities.

[41] as per f/n above.

benchmark gearing for the WACC but rather that the lower gearing in the benchmark measure is consistent with the view that the Authority's allowable Initial Capital Base is too low.

Horizon Power is further concerned that the Authority's modelling reflects a substantially deteriorating Balance Sheet over the forecast period with no allowance for repayment of debt or dividend return to Government. The gearing ratio calculated by the Authority, based on Horizon Power's accounts, increased from 71.3 per cent in 2010 to 81.4 per cent in 2014. Such a Balance Sheet will not underpin a financially sustainable and economically efficient business.

In reflection of the shortcomings of the approach and application of the Indexed Historical Cost analysis, and consistent with Horizon Power's requests within its submission to the Issues Paper[42], Horizon Power requests that the Authority engage with Horizon Power on advancing the assessment of an appropriate valuation to its asset base for consideration within the broader tariff determination.[43]

We identify this as a highly material issue. Electricity businesses are capital intensive - the value of the asset base used in the calculation of the Sustainable Revenue Requirement will be the most significant factor in determining sustainable revenues. It impacts on both the return on and return of capital. The return on capital is the asset value multiplied by the WACC, while the return of capital is the depreciation component of the Sustainable Revenue Requirement. Taken together, these items typically represent some 75 percent of the Sustainable Revenue Requirement for a networks business.[44] In determining the Sustainable Revenue Requirement, the evaluation methodology is therefore seen as critical. To provide some indicative results Horizon Power has undertaken its own high level assessments. These assessments indicate a DORC valuation of the business's network assets (alone), taken at 30/6/2009 (on a similar timeframe as the Authority's Indexed Historical Cost valuation and valued in 2009$) is likely to produce an aggregate asset value for the business in excess of $880 million. Such an asset value would see the business's Sustainable Revenue Requirement increase in the order of $57 million as a result of the increased allowance for return on, and of, capital. Should the Authority choose to apply a WACC more in keeping with the business's view of WACC, then this value would increase further. Clearly recognition of the requirements to earn an appropriate return on and of the business's full asset value greatly assists the business's Financial Capital Maintenance. Horizon Power provides further information within the Private Appendices of this submission.

Capital Contributions

Horizon Power recommends that for Government funded assets the business derives both a return on and of capital, while for customer funded assets the business derives only a return of capital. This will allow Horizon Power to derive sufficient funds to replace these assets and to return to Government its return on equity invested in the business.

[42] Horizon Power (2010) Op Cit at 23

[43] Horizon Power clarifies that such an assessment would be utilised solely for the purposes of the Inquiry. It is not Horizon Power's intention at this time to reflect any change in the asset values within its statutory accounts.

[44] Horizon Power acknowledges that the geographic dispersion of its service area as well as the integration of generation within its integrated value chain will drive other operating costs to a higher level than those in comparative benchmarks from network companies alone.

Generally long lived assets are capitalised and the regulator, when regulating the overall price level, allows investors the opportunity to derive an appropriate return of the investment through depreciation and a return on the investment through the allowed rate of return. An exception is capital provided by customers or by the Government, for which specific adjustments are made within the regulatory framework. Within Horizon Power's service area, customers provide capital contributions to fund extensions to the network to the customer's location (referred to as deep connection costs). Government also funds specific assets, including for example the Pilbara Undergrounding Project, Town Reserves Regularisation and Aboriginal Remote Community Power Supply Program.

Horizon Power identifies that during the period 2006 to 2010 the business accrued approximately $75 million of customer and Government funded assets, with this value set to grow to in excess of $260 million over the Inquiry period. Horizon Power also identifies that due to limitations within the accounting information transferred to the business at its inception, it is not possible to identify the value of such assets within the asset base prior to 2006.

Horizon Power understands that regulators have two potential approaches when addressing capital provided by customers or Government. Firstly the regulator may consider customer funded capital to be an interest free loan to the network provider, in which case the network provider receives no return on that portion of its regulated assets. Alternatively the regulator may impute to the network operator an interest payment on the customer provided capital.

Horizon Power identifies that in a commercial environment, investors must be remunerated for the capital employed in the provision of the service, both for existing capital and for additions to the capital stock (net new investments). This occurs through two separate charges:

- The opportunity cost of the capital employed which is proxied by the allowed rate of return, which reflects the cost of both debt and equity finance; and
- The consumption of the existing asset to provide the service, proxied by the depreciation charge.

Government, when investing in the State's infrastructure, is no different to any other investor. When making decisions of how best to invest tax payer funds, Government assesses the opportunity cost of its investments against its obligations. In Horizon Power's experience, in a fiscally constrained environment it is the ability to derive an adequate risk adjusted return on investment which enables capital projects to be advanced. Such a return then allows Government to reinvest in other social and commercial infrastructure projects. In this context it is therefore highly appropriate that *Government's investments in Horizon Power's asset base derive a return (proxied by the allowed rate of return), with such a return being passed back to Government as part of the annual dividend payment by Horizon Power.*

Investments by customers (deep connection costs) to extend to the network to their premises are undertaken in a manner by which the customer derives the benefit of the supply of energy. This is reflected in a reduced Use of System Charge for the energy supplied (a reduced capital charge). In this regard, Horizon Power agrees with the approach take by the Authority to exclude a return on assets for customer funded assets.

Horizon Power has already highlighted the business's concerns with regard to its prior inability to access return of assets (proxied by the depreciation charge)[45] to support future asset replacement. Horizon Power's requirement to replace assets is no different for assets, be they funded by Horizon Power, Government or customers. Once the assets have been constructed and absorbed into the Horizon Power asset base, it becomes Horizon Power's responsibility to steward those assets and plan for their full life cycle and eventual replacement. By excising these assets from the asset base for purposes of calculating the return of capital, the Authority has not considered how Horizon Power will fund their eventual replacement. Without access to such reserves an inequitable burden is likely to be placed on future electricity users. *Horizon Power therefore requests that all customer and Government funded assets are retained within the asset base for the purposes of calculating the return of capital.*

[45] In the period prior to disaggregation and as a consequence of the operation of the Uniform Tariff Policy.

3. **The forecast operating costs incurred as a result of the delay in obtaining funding approval for the South Hedland power station project be borne by Horizon Power. Consequently, the Authority proposes that $35m (real as at 30/6/2009) be removed from the non-controllable generation operating costs in the NWIS in 2012/13 for the purpose of determining cost reflective tariffs.**

The Authority's approach to establishing efficient costs must consider Horizon Power's external governance and approvals frameworks. In Horizon Power's view, efficient costs are those that are prudent and reasonable for the business to operate its portfolio of assets within its current governance, commercial and regulatory environment. In this regard the Authority should not seek to eliminate the $35 million for temporary generation at South Hedland.

The Authority has identified that:

> "Horizon Power has advised that because of delays in obtaining budget approval for the South Hedland power station project from State Government, Horizon Power's initial commissioning date for the new power station, November 2012, has been delayed until 1 July 2013. This is on the assumption that budget approval will be forthcoming by the end of 2010. Had the original timeframe been met then additional energy purchases would not have been required….The Authority notes the increase in energy purchase operating costs by just under $35m in 2012/13 to cover demand prior to the South Hedland power station being commissioned. The Authority considers that any additional costs incurred by Horizon Power and identified by Horizon Power as resulting from delays in receiving funding approval should not be passed through to the TEC and consequently to SWIS customers. The Authority has removed this forecast expenditure from the generation operating costs included in the cost of service calculation. Furthermore, there is a risk that this increased level of energy purchase costs will continue if the power station project is delayed and so the Authority also recommends that any additional operating cost increases resulting from a delay of the South Hedland generation project are borne by Government through a CSO payment funded from general taxation."[46]

Horizon Power strongly contends that the business's efficient costs associated with the temporary generation at South Hedland are prudent and reasonable and arise as a result of the business operating its portfolio of assets within its current governance, commercial and regulatory environment. On this basis these costs should be included within the cost of service calculation.

We make the following additional points with regard to the Authority's consideration of this expenditure item within Horizon Power's cost base:

- Horizon Power is not a regulated network entity in the sense of its counterpart, Western Power. The Authority has failed to take account of Horizon Power's unique operational, funding and ownership arrangements when putting forward this recommendation. In particular, Horizon Power is a Government-

[46] Economic Regulation Authority (2010)a Op Cit at 43,44

owned enterprise, subject to a range of policies and obligations as part of its corporate governance and oversight. Government, in its normal course of business must be afforded the opportunity to explore all possible options including principal contract extensions and options available to Government within its State Agreements.

- In the absence of a substantive justification based on the efficiency or effectiveness of the expenditure, the Authority appears to be seeking to remove this non-controllable operating cost from Horizon Power's future budgets on the basis that it does not accept that the process of Government approvals is part of Horizon Power's efficient processes and on this basis alone the cost should not be passed through to the Tariff Equalisation Contribution (the TEC) and consequently SWIS consumers – This is out of scope.

- Any view by the Authority as to the effectiveness of the broader mechanisms of Government is outside the scope of this Inquiry.

- The Authority has not given adequate consideration to the business's needs as a commercial entity in a highly costly and difficult operating environment, with ongoing financial commitments and binding constraints on its revenue raising ability. Without the funding for the temporary generation, Horizon Power will be unable to meet all forecast energy demand in the Pilbara in 2012, placing the business in breach of its mandate, as endorsed in the Strategic Development Plan, and its legislative obligations.

- A failure to allow sufficient funding to cover Horizon Power's reasonable expectation of its cost exposures will require Government to supplement Horizon Power's level of aggregate funding (potentially out of consolidated revenues or CSOs as proposed by the Authority) if the business is to be able to deliver against its endorsed mandate.

- Horizon Power views the Authority's proposed funding approach as unnecessarily fragmenting the funding model and being contrary to Government's policy intent when the Tariff Equalisation Contribution fund (the TEC) was established. The business highlights that no such request for supplementary funding has been contemplated within the business's budgetary forecasts. Further, the process to apply for additional CSO funding is complicated and would result in Horizon Power's liquidity being severely impaired during the intervening period.

The $35 million efficient cost allocation for the use of temporary generation at South Hedland should therefore be reinstated into Horizon Power's cost base.

4. **An efficiency target of one per cent compounded per annum be applied to the 2009/10 level of controllable unit operating costs per connection.**

Horizon Power is concerned that the Authority's approach to setting efficiency targets may drive the business, albeit unwillingly, to reduce costs at the expense of service quality.

Horizon Power pursues rigorous downward pressure on costs and in this regard recognises the legitimate requirement for efficiency targets as part of its business practices. However, a poorly designed scheme can have a significant impact on service standards, and the efficiency and competitiveness of the business, with flow on effects to customers, support industries and suppliers. Further, any incentive placed on Horizon Power may potentially have an impact on the standard of living in regional and remote communities, through for example employment and the availability of services.

In formulating an efficiency target, the Authority should also have consideration for what customers and regional communities need and want from their local service provider. These are material issues and should be considered with due care.

While Horizon Power appreciates the Authority's acknowledgement of the volatility and the fixed nature of many elements in Horizon Power's cost base, the business has concerns with the approach adopted for controllable costs within the Authority's efficiency target methodology. In particular the Authority has proposed that the costs it views as being under Horizon Power's control (all non-generation costs) will be de-linked from the actual financial projections the business has put forward within its budgetary submissions and "benchmarked" to provide incentives for efficiency. Such an approach does not consider Horizon Power's operating requirements or provide an accurate view of the business's ongoing financial needs.

The Authority's Approach Efficiency Targets

The level of information provided in the Draft Report has been insufficient for Horizon Power to reconstruct the derivation of the Authority's 1% Efficiency Target. Regardless, we view referencing the target as a 1% target is highly misleading in that our assessment of the Authority's own analysis confirms it to be a 10 to 13% per annum (approx) reduction on controllable operating costs.

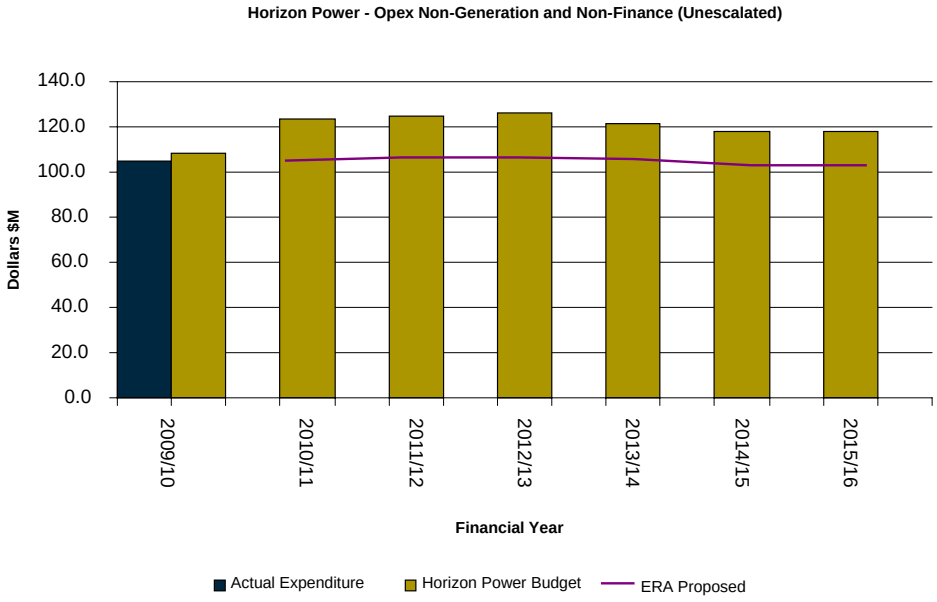
It is our understanding that this calculation includes:

- Selection of Horizon Power's 2009/10 actual expenditure as a base year from which the efficiency target is projected forward – causing a significant understatement of the business's real expenditure requirements in 2010/11;
- The de-linking of the Horizon Power's Asset Management Planning and Budgeting Processes to the Authority's forward projections of Horizon Power's efficient costs – impacting the aggregate budget allocations in each year and annual spend profiles;
- A reduction in the allowed escalation from those adopted by Horizon Power (and approved by the Department of Treasury and Finance as part of State Government's Budgetary Processes); and

- The adoption of a 1% per annum compounding efficiency target to the 2009/10 level of controllable unit operating costs per connection.

Horizon Power's Forward Financial Projections – The Base Year

Horizon Power's forward financial projections reflect the business's evolution within its lifecycle. In particular, being a young business (formed in April 2006) the business is yet to reach its consolidation phase. This is reflected in the operating budgets where the business's expenditures continue to grow (in real terms) until 2012/13, when the business achieves a series of efficiencies and real operating expenditures then decline. This forward expenditure profile is not accidental, but is the culmination of a series of major projects being managed by the business and its rigorous downward pressure on costs. These financial projections and the impacts of the Authority's Efficiency Target are shown below.



Note: These budgets are in 2010$

Horizon Power provided significant context to Parsons Brinckerhoff and to the Authority regarding the business's establishment. While the circumstances of Horizon Power's establishment and its evolutionary needs were well reflected within the Parsons Brinckerhoff Report[47], they have had limited consideration within the Authority's report. The omission of these matters by the Authority limits the reader's ability to understand Horizon Power's position within its lifecycle, impacting the determination of the efficiency of investments.

[47] Parsons Brinckerhoff Op Cit at 86

In 2006 Horizon Power was established with staff from the Western Power Pilbara and Regional business units, a small allocation from the various Western Power corporate support groups and a blend of external recruits at senior executive and Board level. It was understood that Horizon Power, like the other successor entities, would require additional resources and functionality. Further, it was expected that while the successor entities were to receive services (via Service Level Agreements) from one another in the short term, they were to contract on a commercial basis either with one another or with third parties as their understanding of their individual business requirements evolved. These shared services included the provision of such critical infrastructure as Information Technology (including metering, billing and customer services systems, financial systems); network system support; asset design and construction standards; logistics and fleet[48].

Since 2006, Horizon Power has worked through the tasks associated with the systematic and planned development of a new, standalone business. This has included the development of a tailored service delivery model designed to efficiently meet the needs of its diverse and regionally dispersed customer base. Establishing a business from a low base has been resource intensive. Understandably, Horizon Power's expenditures have increased over the last 5 years. However, as was reflected in Horizon Power's submission to the Issues Paper, this was achieved with a minimal increase in real unit costs (per kWh).[49] Specifically, in its submission to the Issues Paper, Horizon Power presented its operating cost performance as follows:

Cost Comparison

	Performance 2006	Performance 2010
COGs	$117,736,000	$173,740,000
COGS per kWh	16.4c	19.1c
Operating Costs	$209,623,000	$284,590,000
Opex costs per kWh	12.8c	12.1c
Average unit cost	29.2c	31.2c

In real terms (2008/9 dollars) Horizon Power's operating costs have showed limited growth since its establishment, with expenditures of $226.876M in the 2006 financial year, as compared to $277.324M in the 2010 year.

This is a notable achievement, particularly having occurred in an environment where Horizon Power has concurrently addressed:

- Significant input cost pressures as a result of the commodities boom;
- Substantial upward movement in fuel costs;
- Transition costs associated with outsourcing to Independent Power Producers;
- Significant remediation of aging infrastructure; and
- The establishment of a new commercial business.

However, *in recognition of Horizon Power's position within its lifecycle, the business is firmly of the view that the Authority, in seeking to provide an efficiency target has erred in determining efficiency targets should commence in the 2009/10 year.*

[48] Horizon Power (2010) Op Cit at 6
[49] Ibid at 8

Of key importance here are the projects in progress to transition the business away from its reliance on legacy Service Level Agreements (SLAs). As stated above, Horizon Power's submission to the Issues Paper of this Inquiry and as acknowledged in the Parsons Brinckerhoff Review, Horizon Power was formed with a significant reliance on third parties to provide a range of services under SLAs that were neither scoped accurately nor priced commercially at the time of disaggregation. It was the intent of Government at the time of disaggregation that these SLAs should remain in place, at the originally determined price, for a period of at least three years. Since inception, Horizon Power has sought to find alternatives to these SLAs since in many cases, the service provider was not a commercial service provider but an independent utility company focussed on servicing its own specific requirements. As a reflection of this, the services were over-sized (and hence expensive) for Horizon Power's needs. During this time, the organisations on which Horizon Power relied for these services also sought to upgrade or replace many of the systems used to provide these services and, through negotiation, Horizon Power achieved extensions of agreements that allowed it to find other service providers, bring services in-house and/or negotiate commercial terms with the existing service providers where the service requirements were complementary. Horizon Power identifies to the Authority that in many cases the business was not able to retain its historic solutions at historic prices.

The full cost of this process will not be experienced by Horizon Power until the completion of the replacement of its Enterprise Resource Platform in 2012/13 however the bulk of actual real costs will begin to be realised by 2010/11.

In essence, t*he Authority's use of 2009/10 does not present a "normal" baseline of reasonable stand-alone operating costs from which to begin Horizon Power's efficiency expectations. A better assumption would be to use the 2010/11 budgeted operating expenditure as a baseline from which to begin efficiency targets.*

De-linking Horizon Power's Asset Management and Budgeting Processes

Horizon Power's annual budgets, including the underlying spend profiles, are created as the outworking of the Asset Management Planning process. The Authority's proposed Efficiency Target de-links the business's funding from the units of work within the planning process. This approach assumes a constant volume of activity and does not reflect the requirements (compliance, safety and regulatory, capacity, reliability, quality and asset service) within the business's Asset Management Plan, a process which has been commended by the Authority's technical consultants, Parsons Brinckerhoff.

One means available to Horizon Power to meet unreasonable funding allocations in the medium term (5 year horizon) is to delay refurbishments and maintenance, and not undertake any projects to increase service levels beyond those currently experienced by customers. Such an approach is clearly not optimal, potentially resulting in an erosion of the benefits delivered to regional and remote electricity customers since the business's establishment in 2006. Further, the delay in critical maintenance and refurbishment expenditures can result in a bow-wave of deferred expenditures which will come at a cost to electricity customers and the State in the future.

Escalation

Horizon Power identifies to the Authority the business's concern as to the escalators determined by the Authority for the Inquiry. Horizon Power views that these escalators dramatically understate the movement in Horizon Power's cost base and have the effect of materially understating the efficient expenditures allowed by the Authority.

Horizon Power has previously identified to the Authority and Parsons Brinckerhoff that its cost base is currently subject to a mix of escalators. In particular:

- The business's labour costs escalate according to the provisions within awards and contractual arrangements;
- Costs for service providers hired on a labour only basis are escalated on a basis similar to Horizon Power's own labour;
- Materials and non-labour services are escalated consistent with a long run growth factor determined from the Building Cost Index (BCI);
- Telecommunications and commercial property management are escalated based on CPI;
- Power Purchase Agreements are escalated based on a blend of escalators to reflect the terms of the individual contract; and
- Fuel is escalated on a range of sources.

Horizon Power understands that the Authority has adopted CPI as the index for the cost base, rather than the application of any of the escalators put forward by the business itself. [50] Under the Authority's approach CPI is used to convert all real (2009) prices for controllable operating costs into nominal terms over the Inquiry period. The Authority has rejected Horizon Power's use of BCI for escalating materials and non-labour services within its controllable cost base on the basis that there is no indication that long term trends in the BCI will continue.

Horizon Power contends that the adoption of CPI by the Authority for the purposes of this Inquiry is inconsistent with the requirements of Financial Capital Maintenance. It is Horizon Power's experience, having spent approximately $80 million of capex in the Pilbara over the last 5 years, that its costs typically escalate well in excess of CPI and this information was provided to the Authority as part of the Inquiry. Current experience advancing $200 million of construction projects suggests no abatement in inflation. This matter was a key part of the scope of work for the Parsons Brinckerhoff review and formed one of their key findings: "Horizon Power's use of escalators is appropriate and this is backed up by two independent surveys and analysis of electricity industry materials and labour costs in Western Australia and Australia as a whole". [51] In reaching their finding Parsons Brinckerhoff reviewed a substantial volume of materials provided by Horizon Power and engaged with Horizon Power's staff on key matters associated with regional service provision.

Horizon Power notes that while Parsons Brinckerhoff presented an overview of their programme of work to substantiate Horizon Power's escalators within their report, the Authority is yet to present its substantiation for its selection of CPI as its preferred escalator for Horizon Power's cost base.

[50] Economic Regulation Authority (2010)b Op Cit at 30
[51] Parsons Brinckerhoff (2010) Op Cit at 55

Horizon Power highlights that it is well accepted that for the economy as a whole, nominal unit labour costs typically increase by more than CPI. Further, labour costs are likely to increase more in those areas affected by the current and prospective mining booms than for the economy-wide average. This is also likely to be the case for non-labour costs, reflecting shifts in the demand supply balance in regional Western Australia. Horizon Power provides further anecdotal evidence in the Public Appendices.

Clearly any cost escalation above that allocated within the efficient cost base will erode Horizon Power's future budgetary allocations, reducing the volume of work that the business can undertake to support its asset base and/or the funds available to invest in new assets. This will act to reduce the business's ability to deliver against its Performance Bargain and impact on the quality of service delivery in regional and remote Western Australia.

Critically, the Authority notes that if the actual efficient costs do increase by more than the CPI, a future inquiry in 3 years can correct for this, although noting this would be "a forward looking adjustment and would not retrospectively compensate Horizon Power for a previous Inquiry period".[52] Horizon Power again highlights to the Authority that the business is not subject to a regulatory framework for ongoing revenue determination. This Inquiry is a one-off review at the request of the Treasurer. The Terms of Reference for the Inquiry do not contemplate subsequent inquiries. Horizon Power's efficient costs are those that arise as a result of the business operating within its current governance, commercial and regulatory environment. Failure to reflect these costs within the business's Sustainable Revenue Requirement will impair the business's Financial Capital Maintenance and clearly compromises an objective of economic efficiency. Furthermore Financial Capital Maintenance cannot be achieved if retrospective compensation is ruled out for a situation where it is expected that revenues will be insufficient to recover costs.

Horizon Power has sought specialist advice with regard to the application of escalators to its cost base and provides this advice within the Public Appendices to this submission.

Average Cost Approach

As identified in the business's submission to the Issues Paper, Horizon Power has in excess of 42,474 customer connections, located in a service area of around 2.3 million square kilometres.[53] This equates to a customer density factor of 54.2[54], as compared to 0.42 in the National Electricity Market (the NEM) and 0.4 in the SWIS. No other electricity business in Australia supplies a similar (small) number of customers dispersed across such a vast service area.[55]

Horizon Power's systems are, in the main, isolated. This factor, in combination with their relatively small scale has significant consequences when assessing the efficiency of expenditures and investments. As highlighted in Horizon Power's submission to the Issues Paper, "[f]rom a size of system perspective, a new load increment that is considered to be relatively routine for a larger system like the SWIS, and potentially the NWIS, can have severe impacts on smaller systems. For example, in a community like Exmouth, an increment of 5 GWh, such as would occur

[52] Economic Regulation Authority (2010)b Op Cit at 31-31
[53] Horizon Power (2010) Op Cit at 2
[54] This represents 1 customer connection per 54.2 square kilometres.
[55] Ibid at 3

with a new resort marina, would constitute approx 20% of the total load, requiring a substantial upgrade to generation and distribution infrastructure, significantly changing the operating profile of the system and the overall cost of supply."[56]

Horizon Power draws to the Authority's attention that the scale and isolation of its business leads to a high average and marginal cost level and a highly volatile cost base, compared to virtually all other power systems in Australia, for its individual systems, particularly when they are assessed on a per connection basis as is the Authority's proposed approach for the Inquiry. Such an averaging approach is only appropriate for large homogenous customer bases (such as Western Power or the Water Corporation), where the addition of a single customer connection will not drive a step change in the cost of supply. Horizon Power contends the Authority's cost per connection approach is wholly inappropriate for the Inquiry as it fails to take account of the small system size and volatility of connection numbers and type within each of Horizon Power's systems. Further, the significant marginal costs which can be required to connect one new connection (when a network or generator has reached full capacity) exclude average cost as an appropriate platform for assessment - a marginal cost assessment is more applicable to Horizon Power's industry context.

The Efficiency Target

Horizon Power highlights to the Authority the difficulties encountered with the application of informal, judgemental benchmarking of the type the Authority has attempted to apply to the business's operating costs (so-called controllable costs). The appropriate expenditure program may vary widely depending on variables like customer growth rates, load growth rates, equipment age and replacement expenditures, underground vs above ground facilities, service quality improvement needs, with little necessary relationship to recent historical trends. Indeed, in other jurisdictions it has been found that the rate of maintenance and investment in the network infrastructure has historically been quite cyclical and as a result it has proven difficult to develop useful statistical benchmarks for future requirements.[57]

The Authority's approach to benchmarking Horizon Power is highly arbitrary and much more demanding on the business than that recommended by Parsons Brinckerhoff. Whereas the Parsons Brinckerhoff report presents a reasonable argument, based on regulatory best practice across the country, for a 3% reduction on Horizon Power's budgeted controllable operating costs, the Authority presents limited substantiation for this recommendation.

The Authority has presented little supporting evidence as to the appropriateness of the benchmarks adopted. In particular, Horizon Power and its advisers have reviewed the Authority's justification for the benchmark target and find it to be as follows:

"the determination of the one percent efficient target is supported by:"

- A similar approach taken for the Water Corporation, where the Authority applied a reduction in the base real operating expenditure per connection of 1.88 per cent per year;
- A similar operating cost efficiency factor of 10 per cent over a 10 year period recommended for Power and Water in its 2009 Network Pricing Reset; and

[56] Ibid at 22

[57] Joskow, P.L. (2007)b, "*Incentive Regulation in Theory and Practice: Electricity Distribution and Transmission Networks"*, August 15 at 40

- The emergence of operating costs as a clear focus for an efficiency target as they are the predominant driver of the total cost of service for Horizon Power (see section 10):"[58]

Horizon Power (and its advisers[59]) provide the following points in response to the appropriateness of these benchmarks:

- It is not clear why the Water Corporation is a relevant benchmark to Horizon Power, from the perspectives of demographics, size, service area, industry type and so on;
- The study for Power and Water did not include an assessment of Horizon Power when forming the relevant benchmark data. The benchmark for determining the efficiency differences included Ergon Energy, Country Energy, Powerco and AusNet[60] and it is also not clear that the recommended target should apply to Horizon Power given its unique characteristics. The study for Power and Water is also outdated as it was based on data up until 2003. To be relevant the study would need to be extended to include Horizon Power and be updated; and
- While operating costs will be a significant driver for Horizon Power, this has been exaggerated by the Authority's proposed Initial Capital Base being set too low with the resulting return on and of capital also therefore being vastly understated. Regardless, the fact that operating costs are the predominant driver in the Authority's analysis does not of itself justify the choice of a specific value for an efficiency target.

Horizon Power stresses its significant concern that the Authority has set aside Parsons Brinckerhoff's key finding with little substantiation or justification. We view this as a matter of significant importance, given Parsons Brinckerhoff was appointed as the Authority's expert adviser for the Inquiry and that the Authority did not attend the onsite interviews or review much of the technical materials provided to Parsons Brinckerhoff.

Further, the Authority has not identified any area of operating expenditure that it believes is either inefficient or ineffective. This provides Horizon Power with little guidance as to where the Authority has identified a short coming in the business's Asset Management practices or approach to managing its business. As clearly noted in our previous submission, "[a] regulators 'best guess' of efficient costs is no substitute for the rigours of a commercial business, whose job it is to ensure that its services are delivered at the efficient cost."[61]

Horizon Power's Approach to Efficiency Targets

Horizon Power accepts the challenge of demonstrating the ongoing effectiveness and efficiency of its operations. As a commercial organisation, Horizon Power places rigorous downward pressure on its cost base and will continue to do so. In this regard the business supports the notion of self-imposed efficiency targets. However, the business finds the theoretical and empirical basis for the Authority's supposed 1% target highly questionable.

[58] Economic Regulation Authority (2010)a Op Cit at 53

[59] Economic Insights (2011), Comments on the ERA Report on Inquiry Into the Funding Arrangements of Horizon Power, 21 January at 17

[60] Meyrick and Associates (2008), "Electricity Distribution X Factors for the NT's Third Regulatory Period", Report prepared for Utilities Commission by Dennis Lawrence, September at iii

[61] Horizon Power (2010) Op Cit at 27

As identified above, Horizon Power has incorporated substantial savings within its operating budget forecasts as a result of rigorous downward pressure on costs. ***This approach to cost management will see the business achieve real savings of 5.6% over the forecast period to 2015/16.***

However, as identified in our submission to the Issues Paper, such opportunities for further efficiencies will, in the absence of technological improvements and economies of scale and scope, become increasingly expensive and only provide incremental benefits.

The business highlights to the Authority that economic efficiency does not only arise from rigorous downward pressure on cost. The Horizon Power mandate allows the business to utilise its assts and explore profitable growth opportunities which can return profits to the business, reducing the need for subsidisation of the Uniform Tariff Policy via the TEC. These opportunities were considered by the Energy Reform Programme and specifically allowed for within Horizon Power's establishment legislation.[62]

Horizon Power therefore views that a better approach to efficiency targets would reflect:

- ***The utilisation of the 2010/11 budgeted operating expenditure as the baseline;***
- ***Reflection that Horizon Power has already incorporated its own efficiency targets through rigorous downward pressure on costs within its budgetary process; and***
- ***Pursuit of growth opportunities which provide economies of scale and scope and/or provide additional revenue streams to reduce the need for subsidisation of the Uniform Tariff Policy via the TEC.***

[62] Electricity Corporations Act (2005) WA at 28

5. **Horizon Power submit in response to the draft report individual business cases for any additional operating expenditure requests over and above the recommended profile as outlined in Table 7.8. The Authority will then consider each request on a case by case basis and include any additions to the efficient level of operating costs in the final report.**

In its response to the previous question, Horizon Power identified a projected uplift in forecast operating expenditures between the 2009/10 actual expenditure and its 2010/11 projections. The business has also identified the concern that while the Authority has recommended a reduction to the business's forecast expenditures it has not identified any area of operating expenditure that it believes is either inefficient or ineffective. This provides Horizon Power with little guidance as to where the Authority has identified a short coming in the business's Asset Management practices or approach to managing its business.

Horizon Power identifies that the cost of this Inquiry has been significant to Horizon Power. External costs alone have resulted in expenditures in the vicinity of $1.1 million. Horizon Power has, to date, not been separately funded for the Inquiry, nor does the business carry a general allowance for such ad-hoc reviews. The business has devoted a substantial amount of time and effort to engaging with the Authority and Parsons Brinckerhoff, directing attention away from operational accountabilities. The preparation of detailed business cases for future budgets (for expenditures which may be several years into the future) is outside of Horizon Power's usual budgeting and approval processes with Government and is not a requirement of this ad-hoc review by the Authority. Further, without detailed information as to the composition of the Authority's recommended budgetary allocations, the process would be highly costly and a distraction for our line staff from their day to day operational activities.

Within this context, Horizon Power has therefore determined to address this question by the Authority in the following manner:

- **To identify at an aggregate level the key drivers for why there is a substantial uplift between the 2009/10 actual expenditure and the 2010/11 projections; and**
- **To provide, for discrete major new expenditures, the business's business case (case for change).**

Horizon Power provides this advice within the Confidential Appendices to this submission.

6. **Horizon Power's actual and forecast capital expenditure program be reduced by $77.4m (real at 30/6/2009) from $841.6m (real at 30/6/2009) to $764.2m (real at 30/6/2009) as detailed in Table 8.2.**

Horizon Power does not support this reduction.

The Parsons Brinckerhoff report assumes the potential disconnection from the NWIS of Rio Tinto Iron Ore (RTIO) is the main driver for the two most material transmission projects, and excludes these two projects on the basis that Horizon Power, at the time of the Inquiry, had not received confirmation from Rio Tinto of the timing of their disconnection.

Rio Tinto have recently provided notice of their intention to disconnect from the NWIS in approximately two years time[63]. Horizon Power has also received advice from the Water Corporation of its intention to construct a 6 GL desalination plant on the Burrup Peninsula to supply the State Government's Pilbara Cities initiative. On this basis, and without other information, *these projects must be completed for the effective operation of the NWIS.*

Pilbara Transmission – Karratha to Roebourne 220kV Line

The Parsons Brinckerhoff Report states the line is required for N-1 capacity to Roebourne. This is not the sole requirement. In addition the line is required to prevent the risk of voltage collapse for the whole system in the event of the disconnection of the RTIO system. Therefore the line ensures adequate provision of N-1 to Horizon Power's loads at Dampier, Karratha, Roebourne, Cape Lambert and Port Hedland, in accordance with Horizon Power's Asset Management Planning criteria.

Horizon Power has in excess of 13,000 customers in the Pilbara, all of whom will be impacted by the RTIO disconnection and requirement for the 220kV line.

Horizon Power therefore contends this capital expenditure should be reinstated.

Dampier to Karratha 132kV Line Replacement and Transformer Upgrade

Horizon Power recognises the strategic importance of the loads on the Burrup Peninsula, and as such has provided for N-1 capacity to the area in accordance with Horizon Power's Asset Management Planning criteria. In their report, Parsons Brinkerhoff proposed the implementation of a distribution solution to supply the area. Such an approach is likely to be at an equivalent cost to a transmission solution, though with the shortcomings of an increased risk to supply security and reduced (or no) capacity to support future loads.

Subsequent to the finalisation of the Parsons Brinckerhoff report, Horizon Power has been notified of prospective loads on the Burrup Peninsula (including the recently announced Water Corporation desalination plant) that would see the load at Dampier increase to in excess of 21.5MVA. Given this change in anticipated demand, *Horizon Power contends this project should now be reinstated.*

[63] Horizon Power has received notification from Rio Tinto Iron Ore (RTIO) of the time frame for the disconnection of RTIO transmission assets from the NWIS as part of its plans for managing its energy requirements. This notification is part of a commercially sensitive Heads-of-Agreement between Horizon Power and RTIO and can be presented to the Authority as proof of this matter but is not included in this public document.

Proposed ENRUP and Pole Management Reductions

Horizon Power strongly contends this capital expenditure is warranted and should not be excluded from planning since the program has been developed in conjunction with Energy Safety in satisfaction of their specific safety concerns.

The Authority's Draft Report recommends removing $3.2 million and $3.3 million out of the five-year capital program for the Pole Management Program (which caters for the reinforcement and replacement of wood poles) and ENRUP (which addresses significant safety issues on the single phase network) respectively. T*he recommended reduction in capital expenditure presents an issue for Horizon Power in managing its duty of care obligations to the public, employees and the environment.*

In addition, the *Electricity (Supply Standards and Systems Safety) Regulations 2001* require the network operator to ensure that '*proper plans are developed and implemented for the inspection, maintenance and (if necessary) replacement of the network or parts of the network*'. The network operator is also required to comply with Standards and codes listed in Schedule 3 of the *E(SSSS)R 2001*, which lists AS 1720.2 – 1990 Timber structures – Timber properties and HB C(b)1 – 1999 Guidelines for design and maintenance of overhead distribution and transmission lines (recently superseded by AS 7000).

Further, Horizon Power received a letter from Energy Safety (22 October 2008) seeking assurance that by the 13 November 2009 Horizon Power's wood poles and associated management practices would:

- Comply with, or exceed the requirements of Order 01-2009 (imposed on Western Power) or if not, that Horizon Power will make the necessary changes to comply with or exceed the requirements in accordance with the same time frames as specified in the Order; and

- Effectively address the other issues identified in the 2008 Audit Review, or if they don't that Horizon Power will amend and implement the changes necessary to achieve compliance.

The letter paraphrased an Order issued to Western Power to address, beyond the current condition based programs, the increased risk of fires associated with non-compliant, aging and deteriorating assets in Western Australia. A key consideration in the Esperance region is the need to deal with the potential of bush fires started by unassisted pole failures.

Horizon Power is actively working with Energy Safety to design and implement new systems and processes that address the Wood Pole Management program over the next three years, subject to funding.

Since 2006, Horizon Power has completed the following activities to address compliance with E(SSSS)R 2001:

- Obtained approval from Horizon Power's Board for the adoption of a Risk Mitigation Strategy (RMS) to address only Extreme and High risk safety conditions for the next four years as a means of reducing capital expenditure. This submission was provided to the Department of Treasury and Finance

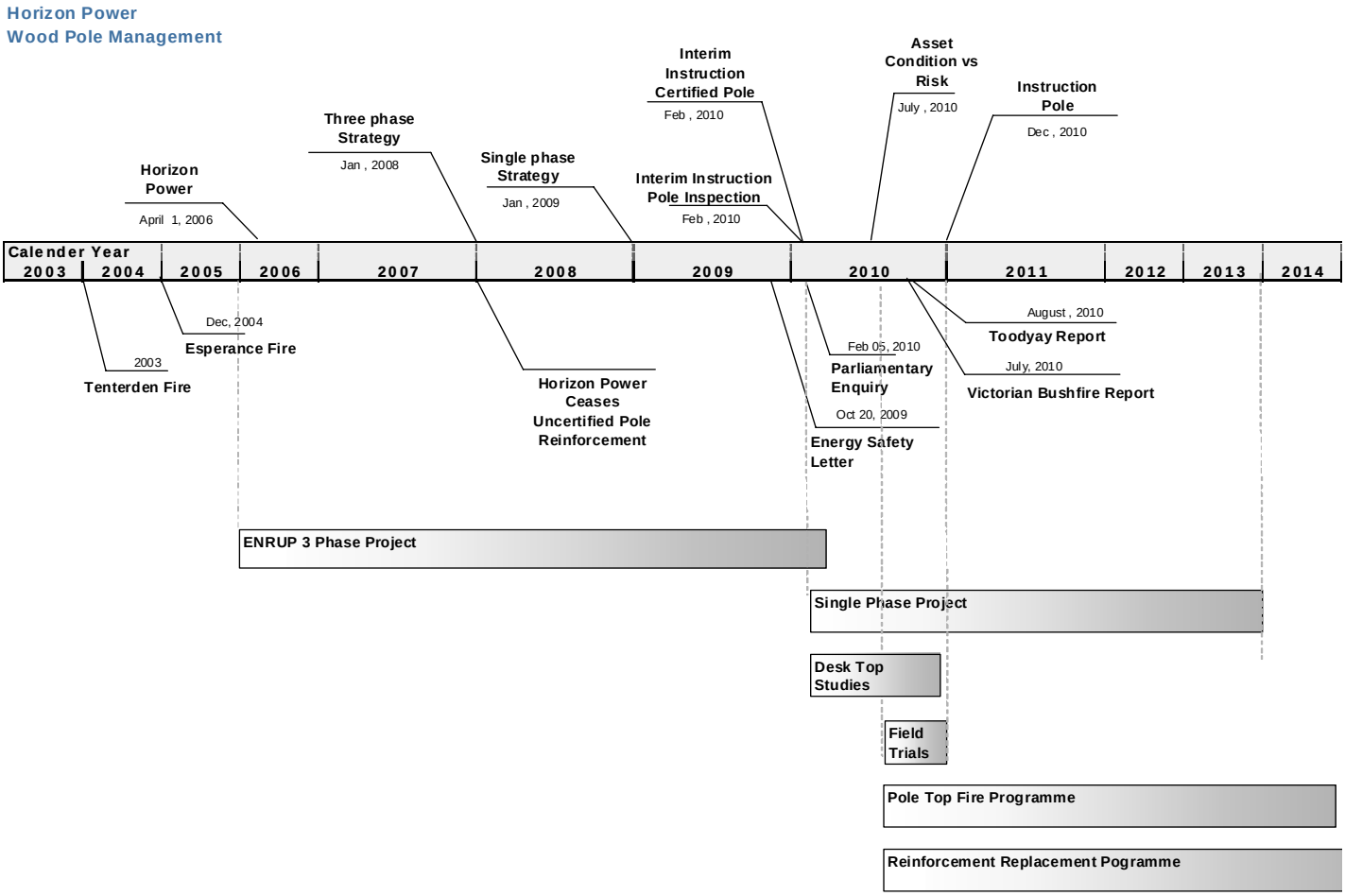
(DTF) as part of the EERC 2010/11 Budget process that delivers all known Extreme and High risk projects by 2013/14 while meeting DTF's request not to increase capital expenditure. To meet this request non committed Moderate and Low risk projects are deferred to later years. This strategy will defer $41M of capital expenditure to 2014/15 and beyond. This approach also smooths the annual budget requirements over the 10 year period to $40M - $60M (escalated) per year.

- Completion of the ENRUP program to address compliance with the E(SSSS)R 2001, HB C(b)1 – 1999 and AS 1720.2 – 1990 through the removal of long bays, clashing conductors and unserviceable poles on the three phase network;
- Modified its wood pole inspection regime in accordance with Energy Safety's Order 01/2009;
- Recommenced reinforcing of wood poles as per AS1720.2 using a certified reinforcing method; and
- Reviewed age details of pole assets as age data was not reliable. This work yielded a major shift in the wood pole age population.

As a part of the Asset Management Plan review for 2009/10, a review of Horizon Power's obligations under the E(SSSS)R 2001 regulations and Energy Safety's Order 01/2009 identified that there are two main programs required to address the status of Horizon Power's wood pole assets:

- Esperance Single Phase Program was established from 2010 to 2012 to deal with installations that do not comply with HB C(b)1 – 1999 (do not have sufficient structural strength to withstand the torsional forces applied by the conductors and assets they support), predominantly skinny poles, long bays (ground clearance) and unserviceable poles to address the loading on the poles, conductors and ground clearance requirements as detailed in HB C(b)1 – 1999. This deals with the requirement of the Order 01 – 2009 item 6 Rural Wood Pole Safety Improvement Plan. This section of the order has detailed deliverables that Horizon Power has to achieve with respect to replacement of poles, reinforcement of all unsupported rural poles that do not comply with C(b)1 -1999 Guidelines for the design and maintenance of overhead distribution and transmission lines, and related technical and engineering standards using maximum wind pressures based on wind speeds with a five, ten and maximum wind pressure specified in that Guideline; and
- Pole Management Program to address the timber poles natural durability and life expectancy for wood pole assets as per AS 1720.2, with the majority on the Esperance Rural network.

The following timeline summarises the activities, both internal and external, that have impacted Horizon Power's Wood Pole Management strategy and the long term programs currently underway (or planned) to manage the business's wood pole legacy, including the Esperance Single Phase project and the reinforcement and replacement of poles in accordance with AS1720.2.

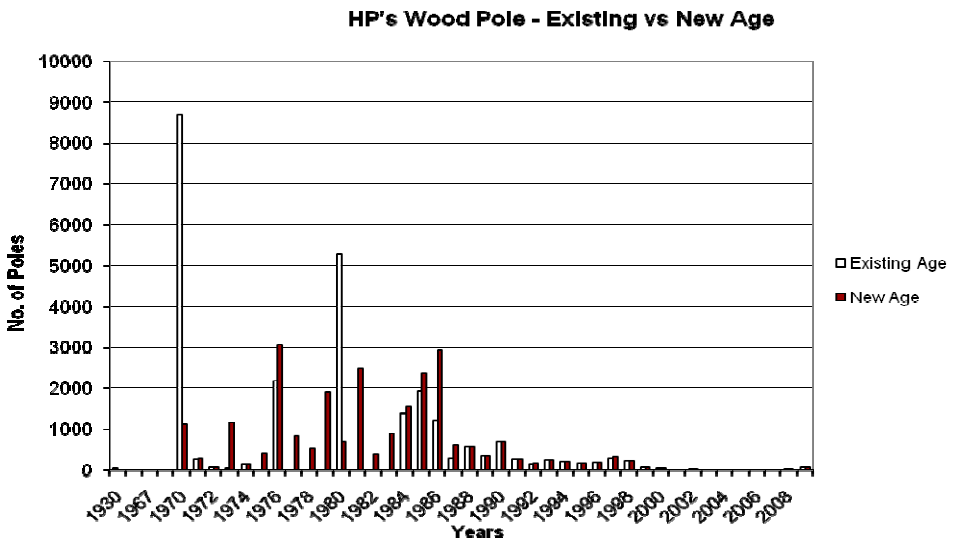


The Esperance Single Phase network is recognised as one of Horizon Power's most significant risks. An example of the possible consequences of such risks was played out in the 2009 Toodyay Bushfires which caused over $100M property damage.

Horizon Power has adopted the pole service life as detailed in AS 4676:2000, AS2209 and AS1720.2 and further detailed in page 4 of the Western Power Order Number 01-2009 which states "The Service life of untreated jarrah poles is specified in AS 1720.2 and AS 2209 to be 15 to 25 years in ground and 15 to 40 years above ground." Given the age profile of Horizon Power's wood pole population this is a major concern and presents a significant public safety risk.

Horizon Power's unassisted pole failure rate exceeds the national benchmark of 1 in 10,000 considerably. The Esperance network exceeds the Australian industry target by 600%. Energy Safety specifically noted this in their letter to Horizon Power on page 1 of the Order on Western Power.

To determine wood pole life of 40 years equates to a replacement program based on this criteria of 2.5% of the poles being replaced per year, assuming a uniform installation regime. Since Western Power and its predecessors did not adopt a uniform installation regime, with the bulk of poles being installed between the mid 1970's and mid 1980's, Horizon Power's replacement program will vary depending on the age and condition of the poles as represented in the age profile below.



The pole reinforcement activities are based on the jarrah pole in ground life exceeding 25 years (as detailed in the Australian Standard) with reinforcement extending the life of the pole to 40 years. The current program has been devised to maximise the asset service while committing the necessary funds to comply with the Energy Safety letter.

Horizon Power provides below a summary of the status of Horizon Power's wood pole population against the age requirements established in AS1720.2. From the table it is evident that Horizon Power has a significant number (30%) of untreated, unreinforced wood poles that have exceeded their defined life as per AS1720.2. The poles need to be addressed.

	Wood Poles against AS1720.2	TOTAL
1	Treated Wood Poles Inside Planned Life	7620
2	Treated Wood Poles Outside Planned Life	0
3	Untreated Reinforced Wood Poles Inside Planned Life	7324
4	Untreated Reinforced Wood Poles Outside Planned Life	879
5	Untreated Non Reinforced Wood Poles Inside Planned Life	1119
6	Untreated Non Reinforced Wood Poles Outside Planned Life	7604
	Total	**24546**

The treatment to address Untreated Reinforced Wood Poles Outside Planned Life (line item 4 in the table above) requires the replacement of the wood pole assets, whilst the treatment for Untreated Non Reinforced Wood Poles Outside Planned Life (item 6) is the reinforcement of the wood poles. These two activities are urgent and present the highest risk. They are currently being addressed, with work scheduled to be significantly escalated in the 2011/12 and 2012/13 financial years in priority order.

Horizon Power, and its employees, have a legal obligation to comply with regulations Horizon Power strongly contends that a slowing of the Wood Pole programs may contravene this duty of care obligation and is therefore an unreasonable proposal by the Authority. Horizon Power strongly contends this expenditure should be retained.

Fairway Drive Substation

The Draft Report states "*Historically, demand in Broome has been overstated and as such a similar overstatement of forecast demand would have been included in the project specifications;"*

Horizon Power undertakes system development planning consistent with Government forecasts and interactions/discussions with Government agencies, including Landcorp. The purported historical 'overstatement' stems from customer funded applications for electricity supply that, whilst they may be delayed, require capacity provision in the load forecast. Delays to third party projects are generally driven by labour shortages, customer finance approvals and project management by the developer. For this reason Horizon Power reviews its Demand and Energy Forecast on an annual basis and manages variations using the Mid Year Review process.

The Draft Report states "*The development is only in its early stages and increased demand is contingent on specific residential development driving demand higher…"*

Horizon Power regularly reviews its Demand and Energy Forecast and noting local activity in Broome has subsequently delayed system augmentation twice since 2006. The Fairway Drive substation was initially forecast to be completed by 2011 but, as described above, was deferred until 2012 and, subsequently deferred again to 2014.

It should also be noted demand is only one factor affecting a decision to expand the capacity of a system, with other factors including power quality (such as voltage levels at the extremities of the network as defined (and required) in the Electricity Act 1945 section 25 (d) and other operational issues, including town isolation and susceptibility to cyclonic activity) being required to be considered when planning network augmentation. Volatility of demand in relatively small power systems must also be considered. Flexibility to address a number of potential outcomes must also be maintained to ensure Horizon Power has allowed sufficient funding at the point of time where the system augmentation is required.

The Draft Report states "*There is limited evidence that other options, to the proposed augmentation, have been properly explored. A more detailed explanation of PB's reasoning behind the proposed reductions can be found in its report."*

Horizon Power has undertaken an assessment of alternative options which has led to material savings and the rescheduling of the new substation. A substantial body of work has been undertaken to consider Broome's expansion options, including timing/ staging, and commercial obligations to Independent Power Producer. As a result of this work, implementation of this project has been delayed. A partial implementation of this project has already commenced in a manner appropriate for the current Broome development, while being cognisant of the longer term system development proposals.

Horizon Power contends this project should proceed and its budgeted expenditure be retained.

New Development affecting the Staging of the Fairway Drive Development

Details relating to the Fairway Drive Development are provided in the Confidential Appendix.

7. A real pre tax benchmark WACC of 6.49 per cent be used for regulatory modelling and calculation of cost reflective tariffs for this inquiry.

The Authority has indicated that its recommendations for the WACC are likely to change[64] prior to the publication of its final report because it intends (subject to feedback) to use a new method for calculating the debt risk premium as set out in a recent discussion paper.[65] However, Horizon Power notes that the Authority has already applied the new methodology within the Draft Report.

Horizon Power draws to the Authority's attention its concern with the process adopted by the Authority to consider WACC for the Inquiry. In particular, we note the recent consultation on the Debt Risk Premium by the Authority. Horizon Power's submission to this consultation is attached in the Public Appendices to this submission.

We view it as unusual that the Authority has elected 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.

As a prudent commercial organisation, Horizon Power has commissioned the support of specialist consultants to support the business throughout the Inquiry. With regard to the WACC, Horizon Power provides attached the advice the business has received from its advisers, Economic Insights Pty Ltd. Horizon Power requests that this advice be read in conjunction with Horizon Power's submission.

Before considering key WACC parameters in detail, it is important to recognise key characteristics of Horizon Power and the issue of whether the benchmarks that might be used to determine an allowable WACC are appropriate.

Distinguishing Horizon Power from Western Power and the CAPM Assumptions

The possible 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's view is 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

[64] Economic Regulation Authority (2010)b at 68

[65] Economic Regulation Authority (2010)c, *"Measuring the Debt Risk Premium: A Bond Yield Approach"*, 1 December

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 capital and opex funding that is fixed in advance through the TEF 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 remains 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 report prepared by Economic Insights.[66] We request full consideration of these matters by the Authority.

Debt Risk Premium

The key points raised in Horizon Power's submission to the Debt Risk Premium consultation undertaken concurrently to this consultation are:

- In recommending its proposed method for measuring the debt risk premium, the Authority makes considerable emphasis on better reflecting the prevailing market conditions for funds. However, to the extent that this position is

[66] Economic Insights (2011) Op Cit at 19-21

adopted for the debt risk premium it should also be adopted for other parameters that are also likely to be affected by prevailing market conditions. Horizon Power identifies here the need for a review of the market risk premium in particular as an outcome of the turbulence in financial markets arising from the Global Financial Crisis (GFC);

- The GFC and its aftermath have been characterised by considerable volatility of returns, which in turn is the main measure of financial market risk and which impacts on an appropriate ex ante market risk premium for both equity and debt. Horizon Power's consultants have provided significant evidence in support of a market risk premium, higher than long term historical averages, potentially in the vicinity of 7.5 to 8.5%;
- The Authority's approach of averaging the debt risk premium over various maturities for similar credit ratings produces a biased estimate; and
- The Authority's approach does not make any adjustments to take account of outliers or illiquidity effects where relevant.

Market Risk Premium

As emphasised above, if the prevailing market conditions are considered to be important in setting the cost of debt, then their impact on the market risk premium and other WACC parameters should also be considered.

In the Draft Report, the Authority considered the impact of the GFC on the market risk premium [67] and the recent Australian Energy Regulator (AER) decision to increase the market risk premium to 6.5 percent to take account of the uncertainty surrounding the GFC.[68] However, the Authority concluded that since the AER's decision the state of the Australian financial market has significantly improved and recommended a market risk premium of 6 percent, consistent with regulatory convention in recent years.

Horizon Power identifies to the Authority that statistical measures of market volatility show that implied volatility in the ASX 200 index over the next 12 months from late April 2010 indicate volatility well above pre-GFC levels.

Horizon Power's advisers, Economic Insights Pty Ltd, have reviewed the work of Bishop and Officer[69] for Westnet, which shows that this measure of volatility is in turn reflected in the relevant ex ante market risk premium. It is Economic Insights strong opinion that Bishop and Officer present evidence, based on the time to recover from previous stock market crashes and the results from trading strategies based on different holding periods, to conclude that mean reversion of the market risk premium would take 3 to 5 years implying an average market risk premium for the period 2010 to 2014 of 9.3 to 10.3 per cent.[70]

Horizon Power views that this evidence, as provided by Economic Insights, the ASX 200 and the work of Bishop and Officer is more relevant than the brief references to economic recovery provided by the Authority.[71] *Horizon Power views the Bishop and*

[67] Economic Regulation Authority (2010)b at 102-103

[68] Australian Energy Regulator (2009), *"Electricity Transmission and Distribution Network Service Providers, Review of the Weighted Average Cost of Capital (WACC) Parameters"*, May

[69] Bishop S, and Officer B, (2009*), "Market Risk Premium, Estimate for January 2010-June 2014 – Prepared for Westnet Energy"*, December

[70] Economic Insights (2011) Op Cit at 19-21

[71] Economic Regulation Authority (2010)b at 103

Officer conservative recommendation of a market risk premium of 8 percent is most appropriate for the purposes of the Inquiry.

Equity Beta

In Horizon Power's submission to the Authority's consultation on the debt risk premium[72], the business provided evidence from Economic Insights Pty Ltd in support of an equity beta of at least 1.0 for a regulated benchmark entity with a 60 percent gearing and an adjustment for a small company premium.[73] This recommendation did not make an adjustment for other factors that would imply greater non-diversifiable risk for Horizon Power relative to the benchmark, nor take account of the impact of the GFC on equity betas for relevant benchmarks, nor include any adjustment for asymmetric risk. The Authority also dismissed the adjustment for a small company premium as it was based on only one study and was based on US data.[74]

These issues have been further addressed by Economic Insights as part of this submission. As noted, Horizon Power requests the Authority review the advice provided by Horizon Power's advisers, Economic Insights Pty Ltd, which is appended in the Public Appendices to this submission. Key points from that work are presented below.

In relation to the GFC, there is persuasive evidence that equity betas for regulated utilities have increased in the wake of that crisis. Economic Insights notes that the average of all equity betas is 1 by construction since beta is a measure for risk relative to the market as a whole. However, firms with above average leverage may experience a relative increase in risk during a debt-related crisis. Firms that have relatively high fixed costs and that also experience greater variability in revenues in a debt related crisis may also experience a relative increase in risk during a debt-related crisis. Economic Insights reviews a study by CEG[75] that estimated the betas for six Australian companies that are primarily owners of regulated utilities for the 150 trading days centred on the day when the ASX 200 reached its lowest point (6 March 2009). The average beta estimates varied from 0.9 to 1.7 depending on the number of days used for the estimates. CEG presented other information to support the relatively high risk for these firms in the period reviewed and concluded that the risk was largely driven by the regulated utilities' exposure to the systemic risks associated with refinancing heavily geared businesses.

It is suggested that this evidence is supportive of an equity beta of at least 1.0 for a regulated entity with 60 per cent gearing and similar characteristics to the regulated utilities in the CEG sample. However, Horizon Power has also highlighted to the Authority the business is quite different to virtually all other electricity infrastructure business in Australia as a reflection of: its small scale; geographic dispersion; low customer density; volatile customer growth; volatile input prices and uncertain funding arrangements. Given these characteristics there is a reasonable likelihood that Horizon Power's non-diversifiable equity risk (as measured by a relevant equity beta) is higher than benchmark companies such as Western Power or those in the CEG sample referred to above.

[72] Horizon Power (2011) Op Cit at 13-17

[73] Economic Insights (2010) Op Cit

[74] Economic Regulation Authority (2010)b Op Cit at 118.

[75] CEG 2010 Estimating the cost of capital for Queensland Water Distribution Retailers, July.

It is important to recognize that this estimate is based on a conventional application of the CAPM for Horizon Power. However, in addition to this conventional assessment there is empirical evidence of a small company premium. There is extensive literature examining the size effect in the United States and to a lesser extent the United Kingdom. There have been relatively few studies in Australia reflecting data limitations. However, a recent Australian study by O'Brien[76] that addressed the data limitations provides persuasive evidence for a small company effect based on Australian data.

An important theoretical reason as to why there is a premium for small companies is that investors need compensation for relative illiquidity in trading equity for small companies. As noted in the separate Economic Insights report[77]:

> "Investors will require a premium to compensate for illiquidity and small companies are more likely to be characterised by illiquidity with respect to equity trading then large companies. In addition, it is likely that this illiquidity premium would increase in times of financial crisis."

Finally there is also the issue of asymmetric risk. The ERA does not accept that it is reasonable to provide for non-systematic risks within the CAPM because of the scope for diversification to eliminate these risks. However, this proposition is only reasonable as a general rule to the extent that the underlying assumptions of the CAPM hold. As noted above, it is clear that one of the key assumptions underlying the CAPM (symmetry of upside and downside potential) does not hold for Horizon Power with respect to its pricing arrangements. Thus there is a strong economic efficiency rationale for adjusting the allowable rate of return to include a premium for asymmetric risk for Horizon Power. For large regulated utilities providing basic services in areas where demand prospects are reasonably secure there may be little asymmetric risk and so this issue may not have received much attention in various regulatory decisions. However, Horizon Power is very different from the typical benchmarks that are used for setting firm specific cost of capital parameters with considerably less secure revenue streams and more variable cost structures. Its upside potential is capped as is the case for many regulated firms but it faces more downside risk. Thus there is a reasonable justification that there should be recognition of higher asymmetric risk for Horizon Power then for listed regulated firms that are typically used as benchmarks.

As a final point it is recognised that it is difficult to quantify asymmetric risk but it is not reasonable to deny that it exists just because the CAPM model has been adopted. *If the risk cannot be reasonably quantified a reasonable alternative that a regulator can adopt is to be conservative with respect to relevant parameters. If this is not done then there will be under compensation for genuine asymmetric risk that clearly arises when upside potential is capped but downside risk is not.*

Based on the above reasons, *Horizon Power therefore contends that its equity beta should therefore be at least 1.0 for the purposes of the Inquiry.*

---

[76] O'Brien, M., (2007), Fama and French Factors in Australia, University of Queensland Business School, November.

[77] Economic Insights (2011) Op Cit at 20

8. **A real pre tax alternative WACC of 4.89 per cent, reflecting Horizon Power's actual cost of debt, be used for determining TEC levels in this inquiry.**

Horizon Power highlights the concern that the Authority has not set as an overarching principle whether Horizon Power's WACC will be based on a benchmark WACC or whether it will be set to closely reflect the cost of capital to be faced by the business itself. It appears that the Authority is following a process of reviewing the elements of WACC, determining each element on an ad-hoc basis with no clear set of guiding principles and desired outcomes. This lack of framework has led to an inconsistency of approach for the various elements of WACC. This inconsistency is evidenced by this recommendation by the Authority to modify one parameter of WACC (the cost of debt) to suit its view of Horizon Power's circumstances while holding all others constant.

Horizon Power is strongly concerned that even by using the real pre tax benchmark WACC of 6.49 per cent the Authority's modelling shows Horizon Power's financial position deteriorating over the Inquiry period. We note therefore that the adoption of an even lower WACC will further erode Horizon Power's financial position, acting contrary to regulatory practice and the principle of Financial Capital Maintenance. Under the scenarios modelled by the Authority, Government does not return a dividend. A situation which would not, in a normal commercial enterprise, attract sufficient new investment to sustain the growth expected within Horizon Power's service area.

Horizon Power has also identified to the Authority the significant sunk investment made by Government in remote and regional electricity infrastructure. Prior to the implementation of the Energy Reform Programme, many of these investments were made by means of debt and equity investments for which Government did not earn a return on, or of, its investment. Horizon Power therefore views it as appropriate that the business's asset values and WACC are set at levels sufficient to allow Government to recover a return on, and return of, its investments in Horizon Power and to earn a return on, and of, its future investments. This is consistent with well accepted, standard regulatory practice. Horizon Power is able to work with the Authority to determine an allowable asset value and a value for WACC such that the principles of Financial Capital Maintenance are upheld. This will in turn be important for achieving economic efficiency.

9. The TEC be funded by a CSO paid directly to Horizon Power.

This recommendation is inconsistent with the Terms of Reference of the Inquiry.

Horizon Power expresses no view as to the appropriateness of the mechanism employed by Government to generate adequate funding to support its Uniform Tariff Policy. Horizon Power's only comment on this matter is that the business needs to be securely funded to ensure the business can continue to provide safe and reliable energy to customers, consistent with its legislated mandate.

10. Should the Government continue to subsidise Horizon Power through a TEC payment funded by SWIS network customers, the lower TEC should be gazetted. This will provide for the lower TEC to be passed through to lower distribution network tariffs in the SWIS.

Horizon Power's unequivocal view is that the business needs to be securely funded to ensure it can continue to provide safe and reliable energy to customers, consistent with its legislated mandate. The Draft Report and its supporting modelling is not sufficiently complete to be relied upon by Government to form the basis of Horizon Power's budgetary allocations.

As stated previously, the Draft Report and recent discussions with the Authority, demonstrate that there are a range of matters outstanding from the Authority's modelling in this report. These matters include:

- The Regulatory Asset Base should be the subject of more comprehensive consideration, including the requirements of Financial Capital Maintenance and the applicability of a Depreciated Optimised Replacement Cost (DORC) valuation[78];

- The determination of an appropriate WACC for Horizon Power. Horizon Power has previously provided information on the appropriateness of various elements of WACC and within this submission provides further information to the Authority. We also note that the Authority continues to separately consult on the Debt Risk Premium to be applied[79];

- The absence of pre-determined business viability criteria for Horizon Power. Analysis is yet to be undertaken on appropriate credit criteria, the outcome of which will impact forecast gearing ratios and interest calculations. The absence of such criteria is evident in the outcomes of the Authority's modelling that show a deteriorating balance sheet over the forecast period with no allowance for repayment of debt or any dividend return to Government. We note the need for Financial Capital Maintenance and the need for consistency between the gearing assumptions to be applied in WACC and those within Horizon Power's own forecast capital structure[80];

- The amendments to asset lives to reflect Horizon Power's depreciable useful lives at the asset class level, the outcome of which will impact return of capital (depreciation)[81];

- The version of the report as issued does not incorporate Horizon Power's approved Demand and Energy Forecast, but rather an earlier version[82];

[78] As considered in section A Recommendation 2 of this submission.

As considered in section A Recommendation 7 of this submission. Horizon Power has provided a submission on debt risk premium, refer Horizon Power (2011), "*Estimating the Debt Risk Premium"*, January 7. The Horizon Power submission was further supported by views from Economic Insights Pty Ltd. See Economic Insights (2011), *Measuring the Debt Risk Premium for Regulated Utilities, Report Prepared for Horizon Power Pty Ltd"*, January 6.

[80] As considered in section A Recommendation 7 of this submission.

[81] As considered in section A Recommendation 2 and 7 of this submission.

[82] Horizon Power considers this matter further in section B of this submission.

- Horizon Power has put forward a major proposal for the approval of Government for the provision of adequate power supplies in the Pilbara. A decision to accept or reject this proposal by Government will have major implications for the Authority's modelling of the business's capital and operating expenditure profiles. An outcome is expected from Government during the drafting of the Authority's Final Report;[83]

- Several events have now occurred post the issue of the Draft Report which materially impact the required capital and operating spends. These include the recent confirmation of the disconnection of the Rio Tinto transmission assets in the Pilbara and the announcement by the Water Corporation of its 6GL Desalination Plant on the Burrup Peninsula. Reflecting that Horizon Power does not have access to ex-poste revenue adjustments, these matters must be considered within the Inquiry process;[84] and

- The recent flooding in and around the town of Carnarvon has highlighted the benefits in emergency response time and service delivery arising from Horizon Power's decentralised operating model and the emergency management capability that is inherent in positioning senior management accountability in regional locations[85]

There are also a range of matters Horizon Power has raised in this response to the Draft Report that, if considered fairly, would also have a material impact on the lower TEC expectations published by the Authority in the draft report. These include:

- The need for a higher than proposed Initial Capital Base and WACC;

- The inclusion of the Pilbara Transmission – Karratha to Roebourne 220kV Line, the Dampier to Karratha 132kV Line Replacement and Transformer Upgrade, ENRUP and Pole Management Program capital works programs;

- The cost of temporary generation ($35 million) to meet a generation shortfall in the Pilbara in 2012 should be included in forward estimates; and

- The recognition that the Authority's efficiency targets are inappropriately timed to commence prior to Horizon Power's operating costs normalising post the cessation of subsidised SLAs.

In Horizon Power's view the Authority also steps outside the bounds of the Terms of Reference of the Inquiry when it makes recommendations on reducing funding, when these recommendations are not based on the efficiency or appropriateness of budgeted expenditure.

Horizon Power highlights that a failure to allow sufficient funding to cover Horizon Power's reasonable expectation of its cost exposures will require Government to supplement Horizon Power's level of aggregate funding (potentially out of consolidated revenues) if the business is to be able to deliver against its endorsed mandate. Horizon Power views this eventuality as contrary to Government's policy intent when the TEC was established and we note that no such request for

[83] Horizon Power considers this matter further in section B of this submission.

[84] As considered in section A Recommendation 6 of this submission.

[85] Matters associated with Horizon Power's decentralised operating structure are further discussed in section B of this submission.

supplementary funding has been contemplated within the business's budgetary forecasts.

11. **A second inquiry into the funding arrangements of Horizon Power be undertaken in three years time to further review Horizon Power's actual costs and to set new efficiency targets.**

Horizon Power has previously identified the issues that arise for the business, operating within its current Performance Bargain. Horizon Power appreciates the Draft Report as one of a series of inputs into the development of a more comprehensive framework for the business. It is Horizon Power's preference to now work with its key stakeholders, including the OOE, DTF and its Minister to develop these arrangements which will position the business to more efficiently deliver against its mandate into the future.