



**THIRTY-EIGHTH PARLIAMENT**

**REPORT 14**  
**STANDING COMMITTEE ON PUBLIC**  
**ADMINISTRATION**

**UNASSISTED FAILURE**

Presented by Hon Max Trenorden MLC (Chairman)

January 2012

## STANDING COMMITTEE ON PUBLIC ADMINISTRATION

### **Date first appointed:**

17 August 2005

### **Terms of Reference:**

The following is an extract from Schedule 1 of the Legislative Council Standing Orders:

#### **“7. Public Administration Committee**

7.1 *A Public Administration Committee* is established.

7.2 The Committee consists of 5 members.

7.3 The functions of the Committee are to inquire into and report on -

- (a) the structure, efficiency, and effectiveness of the system of public administration;
- (b) the extent to which the principles of procedural fairness are embodied in any practice or procedure applied in decision making;
- (c) the existence, adequacy, or availability, of merit and judicial review of administrative acts or decisions;
- (d) any Bill or other matter relating to the foregoing functions referred by the House; and
- (e) to consult regularly with the Parliamentary Commissioner for Administrative Investigations, the Public Sector Standards Commissioner, the Information Commissioner, and any person holding an office of a like character.

7.4 The Committee is not to make inquiry with respect to -

- (a) the constitution, functions or operations of the Executive Council;
- (b) the Governor's establishment;
- (c) the constitution and administration of Parliament;
- (d) the judiciary;
- (e) a decision made by a person acting judicially;
- (f) a decision made by a person to exercise, or not exercise, a power of arrest or detention; or

- (g) the merits of a particular case or grievance that is not received as a petition.”

**Members as at the time of this inquiry:**

Hon Max Trenorden MLC (Chairman)

Hon Jim Chown MLC

Hon Jon Ford MLC (Deputy Chairman)

Hon Ed Dermer MLC

Hon Ken Baston MLC

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## **Government Response**

This Report is subject to Standing Order 337:

*After tabling, the Clerk shall send a copy of a report recommending action by, or seeking a response from, the Government to the responsible Minister. The Leader of the Government or the Minister (if a Member of the Council) shall report the Government's response within 4 months.*

The four-month period commences on the date of tabling.



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## Glossary

<b>2006 Audit:</b>	EnergySafety (2006) <i>Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report</i> . November 2006.
<b>2008 Asset Management Report:</b>	Western Power (2008) <i>Asset Management System - the ERA Assessment Report</i> . 1 October 2008. Lloyds Register.
<b>2008 Audit:</b>	EnergySafety (2009) <i>2008 Distribution Wood Pole Audit Review</i> . May 2009. EnergySafety.
<b>2008 Western Power Licence Report:</b>	Western Power (2008) <i>Electricity Distribution Licence (EDL1) Performance Audit Report</i> . Ernst & Young, November 2008.
<b>2009 Inspector's Order:</b>	<i>Inspector's Order (01-2009) - Western Power's Wood Pole Management</i> . 29 September 2009. EnergySafety.
<b>2009 Notice of Compliance Failure:</b>	<i>Section 32 - Electricity Industry Act 2004 Notice of Failure to Comply with Licence</i> . 8 January 2009. Economic Regulation Authority
<b>2010 Asset Management Report:</b>	Western Power (2010) <i>Asset Management System - the ERA Assessment Report</i> . 1 April 2010. Lloyds Register.
<b>2010 Western Power Licence Report:</b>	Western Power (2010) <i>Electricity Distribution Licence (EDL1) Performance Audit Report</i> . Ernst & Young.
<b>2011 Asset Management Report:</b>	Western Power (2011) <i>Asset Management System Review - Final Report</i> . GHD Pty Ltd. October 2011.
<b>AA1</b>	Western Power's first Access Arrangement period (ie: 1 July 2006 to 30 June 2009)
<b>AA2</b>	Western Power's second Access Arrangement period (ie: 1 July 2009 to 30 June 2012)
<b>AA3</b>	Western Power's second Access Arrangement period (ie: 1 July 2012 to 30 June 2017)

<b>AA3 Submission:</b>	<i>Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. September 2011. Western Power.</i>
<b>CCA-treated.</b>	"Copper Chrome Arsenic"
<b>DAMP:</b>	<i>Distribution Asset Management Plan. Western Power.</i>
<b>DFIS:</b>	Western Power's Distribution and Facilities Information System.
<b>DFMS:</b>	Western Power's Distributed Facilities Management System.
<b>EnergySafety:</b>	Department of Commerce, EnergySafety Directorate.
<b>ENRUP proposal:</b>	Economic Regulation Authority (2011) <i>Inquiry into the Funding Arrangements of Horizon Power: Final Report.</i> 18 March 2011
<b>ERA:</b>	Economic Regulation Authority.
<b>ERA's Western Power AA2 decision:</b>	Economic Regulation Authority (2009) <i>Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power.</i> December 2009. ERA.
<b>HB C(b)1:</b>	"Guidelines for design and maintenance of overhead distribution and transmission lines". (Now known as AS/NZS 7000:2010 "Overhead line design - Detailed procedures".)
<b>July 2009 ERA report:</b>	Economic Regulation Authority (2009) <i>Review of Expenditure Governance - Western Power.</i> Geoff Brown & Associates Ltd. 14 July 2009.
<b>May 2009 ERA report:</b>	Economic Regulation Authority (2009) Wilson Cook, <i>Review of Western Power's Expenditures for Second Access Arrangement.</i> May 2009.
<b>SWIN/SWIS:</b>	South West Interconnected Network/South West Interconnected System (Western Power's principal transmission and distribution network).

**Treasury**

Department of Treasury and Finance.

**UAM:**

Utilities Asset Management.



**EXECUTIVE SUMMARY AND RECOMMENDATIONS FOR THE**  
**REPORT OF THE STANDING COMMITTEE ON PUBLIC ADMINISTRATION**

**UNASSISTED FAILURE**

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**EXECUTIVE SUMMARY**

*Background*

- 1 In September 2009, this Committee resolved to examine the findings of a 2008 Distribution Wood Pole Audit Review of Western Power published by the Department of Commerce's EnergySafety Directorate (**EnergySafety**). There was an obvious public interest in considering if this review had implications for both Western Power and Horizon Power.
- 2 Given the potential consequences of any wooden power pole failure, wooden power pole safety is, quite literally, a matter of life and death. The condition of the State's wooden power pole network asset base is of concern to every Western Australian. The three recommendations made in this Report, and listed below, are made with the dual purpose of ensuring public safety, and restoring public confidence in the management of the State's major publicly owned electricity utility [paragraphs 7.72, 9.14 and 9.19].
- 3 This Committee is not a regulator of Western Power or Horizon Power. It serves the Legislative Council, on behalf of the people of Western Australia. The purpose of this inquiry was to examine what Western Power and Horizon Power, and their regulators have been doing about the condition of the wooden power pole asset base since EnergySafety's *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, published in November 2006 (the **2006 Audit**), and thereafter, report its findings to the Legislative Council.

*Changed Focus*

- 4 Almost as soon as this inquiry commenced, this Committee became aware of significant problems with the compliance culture and asset management systems of Western Power in particular. Less than three weeks after the Committee commenced this inquiry, Western Power was issued with a regulatory notice by EnergySafety. Indeed, as 2009 drew to a close, the Committee was disturbed to note that Western Power had become subject to regulatory enforcement instruments from both of its principal regulators, namely: the Economic Regulation Authority (**ERA**) [part 4], and EnergySafety [part 6]. In addition, both regulators had published deeply troubling

reports suggesting serious systemic, cultural and operational dysfunction within Western Power [parts 3, 5 and 7]. It was also of concern to this Committee that both regulators had made adverse findings about Western Power's wooden power pole asset management systems, practices and processes.

- 5 Given the limited resources of the Committee, the size of the network wooden power pole asset base, and the deeply troubling nature of the regulatory assessments of Western Power in 2009 in particular, the Committee determined, at an early stage, to focus its attention on Western Power, unless and until useful points of comparison with Horizon Power's conduct became apparent.

#### *Inquiry Strategy*

- 6 This Committee determined that, as much as possible, it would assess Western Power's performance on the basis of its reported wooden power pole asset management systems, practices and processes. Over the two years of this inquiry, the Committee carefully gathered information about industry practice throughout Australia. The Committee held private hearings with many of Western Power's key stakeholders. The Committee also gathered all of the relevant publicly available information about Western Power's performance. In addition, the Committee obtained a significant sample of Western Power's wooden power pole asset database, and spent some time analysing its structure and content. The majority of the evidence presented in this Report is taken from publicly available sources.
- 7 On the basis of this careful assessment of the relevant evidence, the Committee held a number of final private hearings with relevant regulatory agencies between September and November 2011. In these hearings, the Committee attempted to reconcile some of the glaring inconsistencies that the Committee discovered, both in Western Power's reported performance, and in the regulation of Western Power - almost all of which was readily accessible on the public record.

#### *Contradictory Signals from Regulatory Agencies*

- 8 During this inquiry, Western Power continued to attract adverse commentary from its principal regulators about its wooden power pole asset management systems, practices and processes [parts 7 and 8]. Despite this growing catalogue of regulatory compliance notices and adverse comment, Western Power's asset management systems continued to receive positive audits from its own consultant reviewers. In addition, the Auditor General consistently gave Western Power's Annual Reports unqualified Audit Opinions, and did not see fit to conduct a performance audit on Western Power. All the while, Western Power was sending out messages in various reports to the effect that it was "*Managing the Network*"; and developing "*comprehensive wooden power pole replacement plans*" (paragraphs 6.12 and 7.63),



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that would provide “*The Solution*”, to its aging network “*Challenge*”. Western Power was well advanced on its “*compliance journey*” (paragraph 5.95 below).

*Western Power’s “network ... reaching the end of its useful and safe life”*

- 9 In spite of its repeated assurances over past years that it was “*Managing the Network*”, Western Power announced, on 15 September 2011, that its “*network was reaching the end of its useful and safe life*”, and that 20 years of accelerated investment was necessary (starting with a five-year, \$1.222 billion funding proposal) to replace or reinforce 160,000 wooden power poles. At this point it became apparent that the Committee needed to review Western Power’s performance since 2006 in a public forum, with respect to its wooden power pole asset base. Two public hearings with Western Power were held in November 2011 so that the Committee, could appropriately scrutinize, and hold Western Power to account for its performance over the preceding five years, with respect to its wooden power pole asset management systems, practices and processes. Western Power has since indicated that it had been hoping to have common purpose with the Committee. This demonstrated a fundamental misconception, on Western Power’s part, about the role of a Parliamentary inquiry.

*Western Power and its Regulatory Agencies*

- 10 This Report sets out the evidence that the Committee has collected since September 2009, and, for the most part, is set out in chronological order. It is hoped that, in this way, the reader will understand how Western Power’s wooden power pole asset management systems, practices and processes have, or have not, responded to adverse regulatory findings over time. The Report also highlights how each of the regulatory agencies has, or in some cases, has not, functioned over time with respect to Western Power’s wooden power pole asset management systems, practices and processes.
- 11 Western Power has clearly failed to adequately manage its wooden power pole asset base to an acceptable level. This is most obviously demonstrated by its “*worst-in-class*” status, throughout Australia, when it comes to its unassisted wooden power pole failure rates. That was Western Power’s status in 2006, and it remains Western Power’s status in 2012. Both of Western Power’s principal regulators have told this Committee that Western Power is the single most difficult energy provider to regulate, across the whole spectrum of their regulatory responsibilities.
- 12 The Committee has found that Western Power appears to routinely provide inaccurate or misleading information to its regulators - including the Auditor General. Indeed, this has even been the case in Western Power’s dealings with this Committee. It is often difficult to determine if this conduct is simple carelessness, or deliberate design.

- 13 Despite five years of adverse regulatory findings, and the investment of extraordinary sums of money, Western Power's wooden power pole asset management record is still unacceptable from either a safety, or efficiency perspective.
- 14 This Committee was disturbed to discover, as a result of its inquiries, that no single agency of government had a comprehensive oversight role with respect to the performance of publicly owned energy utilities. Neither did any single agency of government have a comprehensive oversight role with respect to the regulatory framework within which energy utilities operate. The Office of Energy had clearly failed to perform these tasks. For this reason, the Committee strongly suggests that any successor agency to the Office of Energy should be expressly tasked with these twin oversight roles, namely: the regulatory framework; and the performance of publicly owned utilities. In order to ensure that these twin oversight roles can be effectively implemented it is essential that the present regulatory framework should be, where necessary, strengthened and clarified. For this reason, one of the Committee's three recommendations in this Report is that the Government should commission a comprehensive review of the present regulatory framework for publicly owned utilities in this State (paragraph 9.14). Based on its own limited inquiries, the Committee has also provided a number of suggestions for any such review to consider, as part of that process.
- 15 It is obvious to this Committee that the Auditor General should have commenced a performance audit of Western Power's wooden power pole asset management systems, practices and processes as soon as the Economic Regulation Authority (the **ERA**) published its damning findings about Western Power's management processes and operational inefficiencies in 2009. As a result of these inefficiencies, the ERA effectively imposed a financial penalty on Western Power of \$261 million over the life of the second Access Arrangement period. Despite these findings by the ERA, the Committee notes that Western Power's executive management group had collectively been awarded over \$2 million in performance bonuses, for the period that had been so critically assessed by the ERA, under their performance agreements with Western Power's Board.
- 16 By the time of the ERA's adverse findings in 2009, *EnergySafety* had already documented glaring deficiencies in Western Power's wooden power pole asset management systems, practices and processes between 2006 and 2009. In addition, by the end of 2009, both the ERA and *EnergySafety* had served Western Power with compliance-deficiency enforcement instruments in 2009 which both dealt with wooden power pole issues. Against this background, the question must be asked as to why no performance audit was conducted as a matter of course. It is of concern to this Committee that it was only after the Committee raised the issue in person with the Auditor General in September 2011, that a performance audit was commenced.

- 17 The Auditor General's unqualified audit opinions for Western Power since 2006, despite Western Power's demonstrated management system, practice and process failures are of significant concern to this Committee. The Auditor General's position as an independent Parliamentary Officer places unique obligations on the office, to ensure that the Parliament has the best possible information on which to make decisions that affect the people of Western Australia. It is clear to this Committee that the Parliament has not been getting the best possible information with respect to Western Power's financial and management systems, practices and processes. For example, the Committee has specifically recommended in this Report that Western Power should publish a formal addendum to its 2010/2011 Annual Report (paragraph 7.72). This addendum is necessary to correct deficiencies in Western Power's 2010/2011 Annual Report with respect to Western Power's *Proposed Revisions to the Access Arrangement and Access Arrangement Information, 2012-2017*, September 2011 (**AA3 submission**) lodged with the ERA. These deficiencies represent a significant failure by Western Power to comply with the requirements of the *Electricity Corporations Act 2005*.

#### *Paradigm Shift Required*

- 18 As a matter of principle, this Committee accepts the widely held commercial and corporate premise that past performance is a sound indicator of future potential. On any reasonable assessment, Western Power's past performance has been unacceptable. Unless Western Power experiences a radical paradigm shift, its future appears bleak. Alarming, this puts the safety and wellbeing of all Western Australians at risk, in addition to posing an unnecessary limitation on future economic development.
- 19 Many of Western Power's senior management group held equivalent positions in the corporation's predecessor agency. After more than five years of operations under the present structure, it is clear to this Committee that Western Power's current leadership group is either unwilling, or unable, to make the paradigm shift that is needed to fix Western Power's structural and cultural problems.
- 20 This Committee commenced this inquiry by looking at Western Power's wooden power pole issues. However, as the inquiry has developed, it has become clear that the wooden power pole asset management problem is actually symptomatic of much larger problems within Western Power. As this Report demonstrates, there is now an urgent need for the Government to commission a wide-ranging, independent inquiry into Western Power's management and operations over the past five years since disaggregation. That is why one of the Committee's three recommendations in this Report is that such an inquiry should be immediately commissioned (paragraph 9.19).
- 21 Important lessons must be learned from those mistakes that have been made over the past five years, and which are still being made, under Western Power's current structure. This is essential if Western Power is to be transformed into a truly world-

class electricity utility, rather than simply engage in a superficial make-over. Many of Western Power's staff and contractors are already world-class professionals. It is time for the corporation and its leadership group to live up to the potential that is being demonstrated by these staff and contractors every day of the year. The Committee believes that the findings in this Report provide ample justification for such an inquiry, and demonstrate why meaningful structural reform of Western Power is urgently needed, starting at senior management level.

#### *Parliamentary Accountability*

- 22 The conduct of Western Power during this inquiry with respect to this Committee has raised important questions about the extent to which senior public sector executives understand, or fail to understand, the nature of Parliamentary accountability. This is particularly concerning with respect to Government Trading Entities such as Western Power. During the course of this inquiry, it was repeatedly put to this Committee by Western Power, that the Corporation and its management are not directly accountable to the Parliament, by virtue of the provisions of the *Electricity Corporations Act 2005*. This Committee rejects Western Power's suggestion in this matter out of hand.
- 23 Not only is such a proposition incompatible with the ancient privileges of the Parliament as these have been consistently interpreted by both Houses in this State, it has been expressly, and repeatedly, rejected by the courts. As recently as 2010, the Federal Court stated clearly that statutory authorities that are not agents of the Crown are, nevertheless "*emanations of the State*".<sup>1</sup> In addition, the High Court has held, in a Commonwealth context, that:<sup>2</sup>

*... the conduct of the executive branch is not confined to Ministers and the public service. It includes the affairs of statutory authorities and public utilities which are obliged to report to the legislature or to a Minister who is responsible to the legislature. In British Steel v Granada Television, Lord Wilberforce said that it was by these reports that effect was given to "[t]he legitimate interest of the public" in knowing about the affairs of such bodies.*

- 24 The Committee notes that the High Court has expressly referred, with approval, to the above statement of law, in the context of a State Legislative Council.<sup>3</sup>
- 25 Western Power's conduct with respect to this Committee during the term of this inquiry has been deeply troubling. However, as this matter is of significance to the

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<sup>1</sup> *Sportsbet Pty Ltd v New South Wales* [2010] FCA 604 (16 June 2010), at para 11.

<sup>2</sup> *Lange v Australian Broadcasting Corporation* (1997) 189 CLR 520, at 561, per Brennan CJ, Dawson, Toohey, Gaudron, McHugh, Gummow and Kirby JJ.

<sup>3</sup> *Egan v Willis* (1998) 195 CLR 424, at 451, per Gaudron, Gummow and Hayne JJ.

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Legislative Council directly, the Committee will address its concerns about Western Power's conduct with respect to the Committee separately, in a later report.

## RECOMMENDATIONS

- 26 Recommendations are grouped as they appear in the text at the page number indicated:

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**Recommendation 1:** The Committee recommends that, as a matter of urgency, the Minister for Energy require Western Power to issue a formal addendum to Western Power's 2010/2011 Annual Report. This addendum should be sufficient to correct the existing Director's Report such that Western Power fully complies with the disclosure requirements of the *Electricity Corporations Act 2005*, Schedule 4, clause 11, as these apply to *Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017*, lodged with the Economic Regulation Authority, a submission that was approved by the Board of Western Power on the same date that the Board approved the 2010/2011 Annual Report.

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**Recommendation 2:** The Committee recommends that the Government commission a comprehensive review of the current regulatory framework applicable to electricity network operators in Western Australia. Any such review should consider, but not be in any way restricted to, each of the issues listed at Appendix 4 to this Report.

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**Recommendation 3:** The Committee recommends that, as a matter of urgency, the Government commission a wide-ranging independent inquiry into the structure, culture and operations of Western Power since its disaggregation.

## Extract of Appendix 4 (As per Recommendation 2 above)

### *Recommendations for Legislative/Regulatory Reform*

1. Where energy utilities are required to undergo regulatory and licence-related audits, such audits should be conducted by reviewers that are selected and engaged by the ERA, at the expense of the relevant utility. In the conduct of such audits, there should be absolute clarity that the ERA is the principal for the life of the engagement. This is consistent with current practice relating to the Auditor General.
2. It should be expressly required as a component of any energy licence, that the licensee must comply with their statutory energy safety obligations. The relevant audit reviewers should be required to seek information about this aspect from the energy safety regulator

as part of any such review. EnergySafety should be expressly authorised to make full disclosure to the auditor in such cases.

3. Public utilities should be required to appoint a statutory officer holding the title of “Chief Engineer”. This person should have the necessary technical qualifications and experience to occupy such a position. The Chief Engineer should report directly to the Board and/or Minister. A Chief Engineer’s Report on the “State of the Infrastructure” of the utility should be required in each year’s Annual Report. In this “State of the Infrastructure Report”, the Chief Engineer should be required to report specifically on the operational safety performance of the infrastructure over the financial year in question, and be required to certify the infrastructure’s capacity for operational safety (with or without qualification) over the prospective financial year.
4. Other than the Chief Engineer, executive appointments should be made on the basis of managerial and/or administrative skills, qualifications and ability.
5. There should be a statutory requirement that Executive Directors of any utility be a “*fit and proper person*” as is currently the case in the corporate sphere generally.
6. The ERA and EnergySafety should have the power to bring an action to have an Executive Director of a utility declared to be a not “*fit and proper person*”. An application for such a declaration should be to either the State Administrative Tribunal or the District Court at the first instance.
7. The *Electricity Corporations Act 2005* should be amended so that a general prohibition on making false and misleading statements, similar to s1308 of the *Corporations Act 2001* (Cth) applies to corporations established under that Act. The current provisions are not sufficiently broad in their application
8. Section 18C of the *Energy Coordination Act 1994* should be revised to make the “*order-making*” process more flexible and direct in its application. For example, the existing provision could be amended to allow an Inspector to issue an Order requiring a network operator to inspect a number of components (that is, poles), or replace or repair them (includes reinforce a pole) if these components did not meet the in-service design criteria, or are unsafe.
9. A provision should be introduced into the *Energy Coordination Act 1994* whereby a clear statement of intent by a network operator that they will not comply with a requirement in an Order may be deemed as equivalent to actual failure to comply with the requirement even if the date for compliance has not been reached;
10. A provision should be introduced whereby minimum allowable in-service design criteria are required under the *Energy Coordination Act 1994*, by reference to industry standards,

for certain key components in a distribution and transmission system, that is, specification of the minimum safe in-service design parameters before replacement of the component is required. This is currently what happens with respect to accounting standards.

11. A new offence should be introduced into the *Energy Coordination Act 1994* where a component fails and causes injury to a person, or damage to property, as a result of it not being replaced before it reaches its minimum in-service design strength.
12. A system should be introduced into the *Energy Coordination Act 1994* whereby civil penalties can be imposed for failures relating to safety that require proof only on the civil standard of the balance of probabilities (for example, Division 7 of the Model Work Health and Safety Bill).
13. A system should be introduced into the *Energy Coordination Act 1994* whereby regulators have express powers to seek an injunction; for example, if a company or person does not comply with an Order or provision of the relevant legislation.
14. A provision should be introduced into the *Energy Coordination Act 1994* establishing an obligation for Directors and Officers of a network operator to ensure public electrical safety compliance (for example, s27 of the Model Work Health and Safety Bill).
15. Penalties under the *Energy Coordination Act 1994* should be increased to be comparable to similar corporate penalties in other contexts (for example, *Corporations Act 2001* penalties). The current lack of penalty equivalence has undesirable competitive neutrality implications.
16. Network operators should be open and responsible for their public safety performance. Failure to meet acceptable safety and operating standards should be penalised. Simple performance measures, including those listed below, should be reported publicly, on a quarterly and annual basis, with reference to national benchmarks:
  - Unassisted wood pole failures;
  - Damage or electric shocks;
  - Fires where damage occurs to network assets or other property;
  - Unassisted conductor failures;
17. Network operators should report on the basis of transparent definitions of terms (for example, unassisted failures), as approved by the Director of Energy Safety.





## REPORT OF THE STANDING COMMITTEE ON PUBLIC ADMINISTRATION

### UNASSISTED FAILURE

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#### 1 CHAIRMAN'S INTRODUCTION

##### Terms of Reference

- 1.1 On 9 September 2009, the Standing Committee on Public Administration (the **Committee**) resolved to undertake an inquiry into electricity transmission and distribution management by Western Power and Horizon Power, and in particular:
1. issues raised in the report released by EnergySafety, 2008 Distribution Wood Pole Audit Review (May 2009);
  2. maintenance procedures;
  3. current wood distribution pole management practices;
  4. current wood transmission pole management practices;
  5. the use of other materials beside wood for electrical transmission and distribution poles;
  6. electricity pole management practices in other jurisdictions; and
  7. any other relevant matter.
- 1.2 On 15 September 2009, the Committee advised the Legislative Council of this own-motion inquiry, by way of Special Report.<sup>4</sup>

*Wooden power pole infrastructure management in Western Australia has been a matter of public interest for many years, and will no doubt continue to be of significance well into the future.*

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<sup>4</sup> Hon Max Trenorden MLC, Western Australia, Legislative Council, *Parliamentary Debates (Hansard)*, 15 September 2009, p6844.

## **Inquiry Process**

- 1.3 The Committee placed an advertisement seeking public submissions on the above terms of reference in state-wide and regional newspapers on Saturday, 19 September 2009. Subsequent to this advertisement, the Committee received 36 public submissions. A list of submissions can be found at Appendix 1. The Committee also conducted inquiries related to the above terms of reference in Queensland in March 2009, and in Victoria in February 2011. Further to its initial inquiries, the Committee held two public hearings with Western Power, one on Wednesday, 9 November 2011, and the second on Monday, 21 November 2011. In addition, the Committee held 26 private hearings on the subject of the above terms of reference.
- 1.4 The Committee notes with gratitude, the assistance received from all who made submissions, provided presentations, and those witnesses who attended on the Committee in person during the course of this inquiry.

*... while this inquiry was in its preliminary stages, a number of deeply troubling events occurred that suggested strongly that the inquiry should focus on the asset management processes, systems and practices of Western Power*

## **Scope of the Inquiry**

- 1.5 As indicated in Parts 5, 6 and 7 of this Report, in 2009, while this inquiry was in its preliminary stages, a number of deeply troubling events occurred that suggested strongly that the inquiry should focus on the asset management processes, systems and practices of Western Power. It will be recalled that:
- The ERA served a “*Section 32 - Electricity Industry Act 2004 Notice of Failure to Comply with Licence*” (**2009 Notice of Compliance Failure**) in January 2009.<sup>5</sup> This notice, at Part 7, raised issues about Western Power’s wooden power pole asset management systems. The ERA’s 2009
  - EnergySafety published its *2008 Distribution Wood Pole Audit Review* (the **2008 Audit**) in May 2009;

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<sup>5</sup> Economic Regulation Authority (2009) “Section 32 - [\*“Western Power - Electricity Industry Act 2004: Notice of Failure to Comply with Licence”\*](#)” 8 January 2009.

- EnergySafety served Western Power with *Inspector's Order (01-2009) - Western Power's Wood Pole Management* (the **2009 Inspector's Order**) in September 2009; and
  - The ERA published its *Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power* (**ERA's Western Power AA2 decision**) in December 2009. To the extent that the ERA's Western Power AA2 decision referred to asset management issues, it was of concern to this Committee.
- 1.6 Given such a concentration of adverse regulatory comment on Western Power by its two principal operational regulators in 2009, the Committee determined at a very early stage, to focus its inquiries on Western Power exclusively. As indicated in numerous places within this Report, the Committee notes that Horizon Power has not attracted the same degree of adverse regulatory attention during the term of this inquiry.
- 1.7 For the above reasons, this Report considers the relevant conduct of Western Power. Reference has been made to the conduct of Horizon Power only where this is relevant to the Committee's primary concerns.

*The consequences of an unsafe wooden power pole experiencing an unassisted failure, while supporting live transmission or distribution hardware, can be catastrophic*

### Focus of the Inquiry

- 1.8 The Committee's decision to undertake this inquiry reflected its concerns about both EnergySafety's 2006 and 2008 Audits. Following the publication of EnergySafety's 2008 Audit, the Committee formally resolved to undertake this inquiry. Since that time, the Committee has considered a wide range of publicly available documents, including EnergySafety's 2009 Inspector's Order. In particular, the Committee has noted, with concern, the following observation taken from the 2009 Inspector's Order:<sup>6</sup>

<sup>6</sup> Department of Commerce, EnergySafety, (2009) [\*Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009\*](#), 29 September, 2009, p4. Note also the penalties for non compliance with such an Order at s20(4) of the *Energy Coordination Act 1994*.

*Unrealistic inspection records and strength assessments can result in unsafe poles remaining in service.*

- 1.9 The consequences of an unsafe wooden power pole experiencing an unassisted failure, while supporting live transmission or distribution hardware, can be catastrophic. This concern formed the basis of this Committee's first question to Western Power at the opening public hearing to this inquiry on 9 November 2011. Hansard records the following exchange:<sup>7</sup>

***The CHAIRMAN:** ... The first question on that is: would you agree that every pole failure could, potentially, lead to loss of life or property?*

***Mr Aberle:** Yes, indeed.*

- 1.10 Wooden power pole infrastructure management in Western Australia has been a matter of public interest for many years, and will no doubt continue to be of significance well into the future. Over the past ten years in the south west of this State, there have been as many as 13 bushfire incidents, about which subsequent investigations have suggested that faulty electricity infrastructure may have been the principal cause.<sup>8</sup> This resulted in a tragic loss to the community of three of our fellow citizens. The total loss of property, wildlife and stock as a result of these incidents is not known, but is unquestionably extensive.

*... on days of extreme fire danger the percentage of fires linked to electrical assets rises dramatically. Thus, electricity-caused fires are most likely to occur when the risk of a fire getting out of control and having deadly consequences is greatest.*

- 1.11 In addition to events of concern in this State, those in Victoria during the summer of 2009 further highlighted to this Committee the vital public interest inherent in the management of electricity infrastructure generally, and the management of wooden

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<sup>7</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 9 November 2011, p2.

<sup>8</sup> That is, Gingin in 2002, Bridgetown in 2003 and in 2004, Esperance in 2004, Wungong in 2004, Dalyup in 2004, Toodyay in 2007, Parryville in 2007, Parkerville in 2008, Yanchep in 2009, Cape Naturalist, Dunsborough in 2009, Balingup in 2009, and Toodyay in 2009. The Committee notes its appreciation for the assistance of Associate Professor Kevin Brown, School of Business Law and Taxation, Curtin University of Technology in providing these details.

power pole infrastructure in particular. One of the most chilling findings of the 2010 Teague Royal Commission Report on the 2009 Victorian Bushfires was that the Kilmore East fire, in which 119 local people perished, was contributed to by “conductor failure caused by fatigue on a Single Wire Earth Return line.”<sup>9</sup> As the Teague Royal Commission Report observes:<sup>10</sup>

*... on days of extreme fire danger the percentage of fires linked to electrical assets rises dramatically. Thus, electricity-caused fires are most likely to occur when the risk of a fire getting out of control and having deadly consequences is greatest.*

- 1.12 The relevance of these comments to a State that has long dry summers such as ours, can be readily appreciated. Indeed, Western Power has recently made the following relevant observations with respect to its own electricity network:<sup>11</sup>

*Western Power has a vast electrical network that impacts the general community. Our infrastructure crosses both public and private property, above and below ground. While an inherent risk exists in any electrical network, we have a responsibility to apply a prudent and diligent approach to managing the public safety risk associated with our assets.*

*The potential for electricity network assets to ignite bushfires is one of the most significant public safety risks for the Western Power Network. Approximately 25% of our wood poles are located in ‘extreme’ or ‘high’ bushfire risk areas. Our challenge is to ensure these distribution assets continue to operate safely and are replaced before they reach the end of their useful life.*

*The potential for electric shock is also inherent in distribution network assets such as overhead customer service connections.*

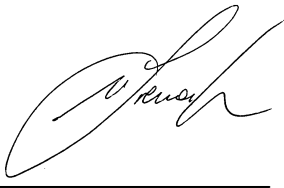
*“The potential for electricity network assets to ignite bushfires is one of the most significant public safety risks for the Western Power Network. Approximately 25% of our wood poles are located in ‘extreme’ or ‘high’ bushfire risk areas.”*

<sup>9</sup> Victoria, Teague Royal Commission, 2009 Victorian Bushfires, Final Report, July 2010, p151. See also Royal Commission Exhibit 525 at: [www.royalcommission.vic.gov.au/Exhibits](http://www.royalcommission.vic.gov.au/Exhibits).

<sup>10</sup> *Ibid*, p12.

<sup>11</sup> Western Power (2011) [Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017](#). (Access Arrangement Information 30 September 2011, p38).

- 1.13 These risks to public safety, together with the subsequent risks to emergency response and repair personnel, that can result from unsafe wooden power poles remaining in service are matters of vital public interest. The seriousness of such risks suggested to the Committee that it was necessary to ensure that the wooden power pole asset management systems of Western Power appropriately manage these risks. To this end, the Committee has inquired into the response of Western Power to the 2009 Notice of Compliance Failure, the 2008 Audit review and the 2009 Inspector's Order, and reports its findings on this inquiry to the Legislative Council.



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Hon Max Trenorden MLC  
Chairman

20 January 2012

## 2 INQUIRY OVERVIEW

- 2.1 Western Power, in its present form, was established under the *Electricity Corporations Act 2005* as a stand-alone electricity transmission and distribution utility. A standard corporate structure was introduced, with management reporting internally to a Board of Directors. The role of the shareholder of the corporation is fulfilled by the Minister for Energy.
- 2.2 The ERA was established as Western Power's principal regulator, with responsibility for regulating access to the South West Interconnected Network (SWIN) in such a way as to minimise the incentive for self-interested monopolistic behaviour. The ERA also became Western Power's licensing authority, with responsibility for ensuring that Western Power operates its networks in accordance with the relevant licensing codes.
- 2.3 In addition to the ERA, Western Power is subject to the regulatory oversight of EnergySafety.
- 2.4 From a financial perspective, the Auditor General provides assurance to both the shareholder Minister and the Parliament that the financial disclosures in the Annual Reports meet the requirements of both the governing legislation, and relevant accounting standards.<sup>12</sup>

*Less than three weeks after the Committee commenced this inquiry, Western Power was issued with a major regulatory notice by EnergySafety.*

- 2.5 This Committee became concerned about the general issue of Western Power's wooden power pole asset management systems, processes and practices as a result of the EnergySafety's 2006 Audit. The Committee's concerns about this issue became acute in 2009 when, in January of that year, the ERA issued its 2009 Notice of Compliance Failure against Western Power, under s32 of the *Electricity Industry Act 2004*. Part 7 of this notice referred to Western Power's wooden power pole asset management systems, processes and practices.

<sup>12</sup> In addition, the Auditor General conducts performance audits on State sector entities to determine their compliance performance: see for example, Office of the Auditor General, Report 8 – September 2011 "[Ensuring Compliance with Conditions on Mining](#)".

- 2.6 As a result of its growing sense of unease about this matter, and in response to EnergySafety's 2008 Audit, the Committee resolved to hold this inquiry.
- 2.7 Less than three weeks after the Committee commenced this inquiry, Western Power was issued with a major regulatory notice by EnergySafety. This 2009 Inspector's Order was made out under section 18B of the *Energy Coordination Act 1994*. This order was issued on 29 September 2009, and required Western Power to take certain remedial action with respect to its wooden power pole asset management systems, processes and practices.<sup>13</sup>
- 2.8 In December 2009, the ERA released its final decision on Western Power's proposed AA2 submission.<sup>14</sup> This decision was highly critical of Western Power's management processes, and made particular reference to "*deficiencies in the management of network assets and operations*"<sup>15</sup> As a result of these adverse findings, the ERA determined, in 2009, that Western Power should be prevented from recovering \$261 million from customers over the life of the second Access Arrangement period (AA2). This amount represented a measure of the inefficiencies that the ERA had identified in Western Power's management systems, processes and practices over the previous years.

... the ERA determined that Western Power should be prevented from recovering \$261 million from customers over the life of the second Access Arrangement period (AA2). This amount represented a measure of the inefficiencies that the ERA had identified in Western Power's management systems ...

- 2.9 It was against this background of troubling revelations that the Committee undertook its inquiries. In the following sections of this Report the Committee surveys the findings of EnergySafety's 2006 Audit and 2008 Audit reports, in the order in which they were published. The subject matter of the 2009 Notice of Compliance Failure and the 2009 Inspector's Order will be considered, including the outcome of each of

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<sup>13</sup> Department of Commerce, EnergySafety, (2009) [\*Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009\*](#), 29 September, 2009.

<sup>14</sup> Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009, p199.

<sup>15</sup> *Ibid* p128, at para 472.



these regulatory notices. The Committee will then examine relevant events that have occurred since 2009, before proceeding to summarising the current situation.

- 2.10 In the final pages of this Report, the Committee reflects on the implications of its findings for future practice. There are significant implications for the relevant legislation, each of the regulatory agencies, the Parliament, and, of course, for Western Power itself.

### 3 ENERGYSAFETY'S 2006 AUDIT OF WESTERN POWER

- 3.1 The 2006 Audit report related to investigations which had taken place in 2005 while Western Power was in the process of disaggregation under the terms of the *Electricity Corporations Act 2005*. The findings of the report placed the incoming Board and management of Western Power in an excellent position to understand its asset base, and the inadequacies of its legacy asset management systems and processes, at the very outset of its new incarnation. This provided a unique insight, and presented an exceptional opportunity for the incoming Board and management to put the new organisation on the most appropriate footing to ensure its future well-being.

#### Wooden Power Pole Line and Reinforcement Findings

- 3.2 In its 2006 Audit, EnergySafety indicated that Western Power's line and pole design systems were, at that time, applying an outdated 1991 version of the relevant electricity supply standard, HB C(b)1 "*Guidelines for design and maintenance of overhead distribution and transmission lines*" (HB C(b)1 - 1991).<sup>16</sup> This standard had been updated in 1999 (HB C(b)1 - 1999). EnergySafety further indicated that its review had revealed no evidence to suggest that any of Western Power's wooden power pole reinforcement arrangements complied with HB C(b)1 - 1999.<sup>17</sup>

*The findings of the [2006 Audit] placed the incoming Board and management of Western Power in an excellent position to understand its asset base, and the inadequacies of its legacy asset management systems and processes, at the very outset of its new incarnation.*

- 3.3 The 2006 Audit also made adverse findings about some of Western Power's wooden power pole design and construction functions, related management systems and quality assurance processes.<sup>18</sup> For example, the 2006 Audit found that the actual number of conductors installed on distribution network wooden power poles was in the order of 1.5 times the number that was recorded in the relevant asset record. The 2006 Audit also found that wooden power poles were often not embedded to the required depth.<sup>19</sup>

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<sup>16</sup> Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p14.

<sup>17</sup> *Ibid*, pp14 and 27.

<sup>18</sup> *Ibid*, pp15 and 19.

<sup>19</sup> *Ibid*, p16.

- 3.4 Western Power's wooden power pole reinforcement practices also attracted adverse findings in the 2006 Audit. These adverse findings flowed from a finding that the wooden power pole serviceability criteria adopted in Western Power's wooden power pole inspection regime was inadequate.<sup>20</sup> This issue is discussed further separately, commencing at paragraph 3.34 below. At this point, it should be noted that the same inadequate serviceability criteria formed the basis of wooden power pole reinforcement decisions. It was therefore relevant to all subsequent assessments of reinforced wooden power pole serviceability. In addition, as the 2006 Audit observed:<sup>21</sup>

*EnergySafety also has evidence of reinforced poles that have failed above the reinforcing steels, which further supports the concerns for the findings relating to the reinforced poles serviceability criteria used by Western Power. These poles failures above the reinforcing steels not only question the pole inspection and serviceability criteria used, but also in some case the structural adequacy of the poles when they were first installed.*

*These reinforced poles failures also question the validity of Western Power's blanket pole base reinforcement programs. Pole base reinforcement will strengthen the pole at the ground line, but will not improve the strength of a structurally inadequate pole above the reinforcing steels.*

*... the wooden power pole serviceability criteria adopted in Western Power's wooden power pole inspection regime was inadequate.*

- 3.5 EnergySafety's 2006 Audit highlighted the lack of any quality assurance systems within Western Power to ensure that reinforced wooden power poles were serviceable to the standards required by HB C(b)1 - 1999. The requirements of good industry practice were referred to in evidence before the Committee by the Managing Director, Mr Doug Aberle, as follows:<sup>22</sup>

**The CHAIRMAN:** *As well as being outside of Western Power's control, one of the requirements of the definition is that the failure complained of could not have been avoided by the exercise of good electricity industry practice. If your wooden power poles failed because they did not meet industry standards, how can Western*

<sup>20</sup> *Ibid*, p15.

<sup>21</sup> *Ibid*, p19.

<sup>22</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p31.

*Power prove that it complies with good industry practice as the definition requires?*

**Mr Aberle:** *Good industry practice says that if you have an extant network built to a variety of standards over a period of time, no-one expects that as standards change you will run back and replace everything at once. The expectation is that you will migrate the system to that standard over a period of time. Good industry practice is to operate the network with a good risk profile, with a good process for determining the serviceability of poles, and to replace them over time in a way that is both affordable and able to be resourced. That is precisely the circumstance. You can have a situation where a pole might fall at 120 kilometres an hour because it is built to an earlier standard, but it is not feasible to go out and rebuild the network every time a standard changes. This practice is actually common across the country.*

*“Good industry practice is to operate the network with a good risk profile, with a good process for determining the serviceability of poles, and to replace them over time in a way that is both affordable and able to be resourced.”*

- 3.6 The Committee accepts the above proposition put by the Managing Director that; *“Good industry practice is to operate the network with a good risk profile, with a good process for determining the serviceability of poles, and to replace them over time in a way that is both affordable and able to be resourced.”* Unfortunately, as discussed throughout this Report, there is reason to question whether, even on the Managing Director’s test of “good industry practice”, Western Power’s performance has been acceptable. For example, EnergySafety’s 2006 Audit noted that:<sup>23</sup>

- ***Design Compliance***

*Western Power does not have records of the design calculations of its current wood pole structures being erected, nor design calculations for any of the poles that still exist in its networks that would demonstrate compliance with the technical requirements of the Regulations. There is also evidence to suggest that some of these earlier wood poles did*

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<sup>23</sup> Department of Commerce, EnergySafety, *Western Power’s Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p5.

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*not have the minimum required structural design factors of safety.*

- 3.7 It is therefore unclear to the Committee on what basis Western Power continues to assert that its wooden power pole assets have a “good risk profile”, when the safety regulator found as far back as 2006 that “*Western Power does not have records of the design calculations of its current wood pole structures being erected, nor design calculations for any of the poles that still exist in its networks*”.
- 3.8 The 2006 Audit further found that Western Power’s quality assurance processes surrounding wooden power pole reinforcement activities were, at that time, inadequate. The Committee particularly notes the following finding.<sup>24</sup>

*The audit found that Western Power fieldwork audits specifically excluded pole base reinforcement activities. The audit also did not discover any records of the time taken to reinforce poles that had been identified for reinforcing. There were no records to suggest that Western Power is routinely monitoring and reporting on the reinforcing arrangements installed and this work activity generally.*

*The EnergySafety audit also did not discover any monitoring or compliance management systems for the pole base reinforcement activity.*

*... findings in 2006 relating to network line and reinforcement systems, processes and practices provided Western Power with both a baseline from which to monitor future progress, and a strong signal about the imperative for remedial action.*

- 3.9 After reviewing the wooden power pole reinforcement arrangements recorded in Western Power’s Distributed Facilities Management System (DFMS), the 2006 Audit observed.<sup>25</sup>

*The audit found a large number (~60) of different pole base reinforcement arrangements in the DFMS records of Western Power’s networks.*

*The audit did not find any evidence of trials or calculations that support the use of any of the reinforcement arrangements discovered*

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<sup>24</sup> *Ibid*, p21.

<sup>25</sup> *Ibid*, p20.

*based on an acceptable factor of safety when the poles and power lines are subjected to the wind and other loads specified in HB C(b)1 1999.*

*The audit also did not find any documentation that clearly and authoritatively specified what are (and are not) approved pole base reinforcement arrangements, and specifications of the poles on which they should be used.*

- 3.10 A site-based physical audit by EnergySafety, of a sample of DFMS reinforcement records, compared with actual wooden power poles, indicated that the reinforcements for between 4% and 5% of the wooden power poles did not correspond to the DFMS record to a significant degree. This finding relates to another finding of the 2006 Audit, namely: that there was, at the time of the audit, no structured or systematic reporting and recording of wooden power pole reinforcement field activity.<sup>26</sup>
- 3.11 The Committee notes that the above findings in 2006 relating to network line and reinforcement systems, processes and practices, provided Western Power with both a baseline from which to monitor future progress, and a strong signal about the imperative for remedial action.

### Wooden Power Pole Failure Rates

*Western Power's relatively high wooden power pole failure rate was due to:*

- \* Inadequate Pole Condemnation Rates;*
- \* Inadequate Pole Replacement Rates;*
- \* Inadequate Wooden power pole Asset Management Systems to ensure Compliance with either Regulations or Relevant Industry Standards.*

- 3.12 The 2006 Audit indicated that, at that time, Western Power was reporting annual unassisted power pole failures at a rate well above those experienced by other Australian electricity network operators. Further:<sup>27</sup>

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<sup>26</sup> *Ibid*, p21.

<sup>27</sup> *Ibid*, p3.

*Western Power's wood pole failures were in the range of 130 to 290 poles each year. There is some uncertainty about the actual number of pole failures, which were not routinely monitored and reported at the time of the audit. The numbers provided put Western Power's pole failure rates at 2.1 to 4.8 times the industry target of 1 pole failure per year for every 10,000 poles in the network. Western Power's pole failure rates are in the range of 10 to 25 times those being achieved by the leading Australian network operators, which are now targeting failures of 0.1 pole failures per year for every 10,000 poles in the network.*

- 3.13 The 2006 Audit found that Western Power's relatively high wooden power pole failure rate was due to:
- inadequate Pole Condemnation Rates;
  - inadequate Pole Replacement Rates; and
  - inadequate Wooden power pole Asset Management Systems to ensure Compliance with either Regulations or Relevant Industry Standards.
- 3.14 In addition, the 2006 Audit made particular mention of the pattern of unassisted wooden power pole failures in Western Power's rural network. Five years have passed since EnergySafety's 2006 Audit was published. However, on the basis of Western Power's regulatory history outlined in this Report, the Committee remains deeply troubled about the condition of Western Power's rural network wooden power poles, and about the ability of Western Power to ensure the continued reliability and safety of those wooden power poles in rural areas.
- 3.15 Each of the issues raised in paragraphs 3.13 and 3.14 above, are discussed in more detail in the following paragraphs.

*... the Committee remains deeply troubled about the condition of Western Power's rural network wooden power poles ...*

- 3.16 The Committee notes the following observation in EnergySafety's 2006 Audit:<sup>28</sup>

*EnergySafety has several Western Power pole failure investigation reports that include pages from Western Power's DFMS records. These show factors of safety of the poles that failed based on no loss of good wood; that is the initial strength of the wood in the poles when they were installed. ...*

<sup>28</sup> *Ibid*, p24.

*It is also difficult to accept the implication in these reports that there was no loss of good wood in these poles even though they had been in service 20 to 30 years or more when they failed.*

*The failure of these poles in wind conditions that were less onerous than the HB C(b)1 design wind loads supports the conclusion that the poles did not have the required strengths (or factors of safety greater than 2) for them to have remained in service.*

*None of the poles investigated in these reports were identified as unserviceable when they failed, and none had been scheduled for pole base reinforcement or replacement.*

- 3.17 The implications of these flawed asset records for future asset management remain of genuine concern to this Committee. The Committee notes that the quality of Western Power's asset records remains a point of concern. For example, as part of its inquiry, and under a summons issued on 20 October 2010, the Committee received documents comprising a sample of Western Power's DFMS, and Distribution and Facilities Information System (DFIS) (the summons is reproduced at Appendix 2). These documents (totalling over 180,000 pages of information) related to Western Power assets located in the Shires of Toodyay and Cranbrook. The Committee's own review of this dataset confirms that the concerns expressed by EnergySafety in 2006, about the reliability of information contained in Western Power's asset records, were reasonable in all the circumstances.

#### *Pole Condemnation Rates*

*Western Power's wooden power pole condemnation rates were "disconcertingly low", and were substantially lower than those of comparable Australian operators.*

- 3.18 EnergySafety's 2006 Audit noted that Western Power's wooden power pole condemnation rates were "disconcertingly low", and were substantially lower than those of comparable Australian operators.<sup>29</sup> The figures relied upon by EnergySafety in forming this assessment, were provided by Western Power in June 2006.<sup>30</sup> The data provided at that time indicated that for the year in question "2522 (1450

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<sup>29</sup> *Ibid*, p27.

<sup>30</sup> Hon Fran Logan MLA, Minister for Energy, Western Australia, Legislative Assembly, *Parliamentary Debates (Hansard)*, 13 June 2006, p3658.



*metropolitan and 1072 rural) poles” were condemned, constituting a wooden power pole condemnation rate of 0.37%. As the 2006 Audit proceeded to observe:<sup>31</sup>*

*... a sustained condemnation rate at this level implies an average network pole life of 263 years, which is not credible.*

- 3.19 In the opinion of EnergySafety, this raised the possibility that Western Power’s wooden power pole inspection practices were inadequate, either in terms of scale or methodologically, or both. The consequences of such inadequacies, that were specifically identified in the 2006 Audit, were that: Western Power was not reliably identifying unsafe wooden power poles prior to the point of structural failure; and that, a substantial wooden pole inspection backlog was accumulating.<sup>32</sup>
- 3.20 The Committee notes that the above findings in 2006, relating to Western Power’s wooden power pole condemnation rates, provided Western Power with both a baseline from which to monitor future progress, and a strong signal about the imperative for remedial action. On the basis of such a finding, the Committee believes that it would have been entirely reasonable for Western Power to aggressively address its program of wooden power pole inspections. It was also apparent that Western Power had reason to reconsider its wooden power pole inspection methodology.

#### *Pole Replacement Rates*

*“Western Power’s reported pole replacement rate infers an average pole life of 414 years (100/0.24), which is not credible.”*

- 3.21 EnergySafety’s 2006 Audit made the following observations regarding Western Power’s reported rates of wooden power pole replacement:<sup>33</sup>

*Western Power’s reported pole replacement rate infers an average pole life of 414 years (100/0.24), which is not credible and will not deliver acceptable wood pole network safety performance.*

- 3.22 The 2006 Audit also expressed EnergySafety’s concern that the wooden power pole replacement rate reported by Western Power for the relevant period was actually

<sup>31</sup> Department of Commerce, EnergySafety, *Western Power’s Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p26.

<sup>32</sup> *Id.*

<sup>33</sup> *Ibid*, p4.

lower than the wooden power pole condemnation rate. As the 2006 Audit observed, sustained discrepancies such as these:<sup>34</sup>

*... will result in an accumulation of unserviceable poles that should not be allowed to develop.*

- 3.23 The Committee further notes the following observation of EnergySafety in the 2006 Audit about the age profile of the wooden power pole asset base, and Western Power's rate of wooden power pole replacement:<sup>35</sup>

*It is evident from this data that most of the poles existing in Western Power's networks today were erected between the early 1950's and the early 1990's, that is most of the wood poles have been in service between 15 and 65 years. Given this wood pole age range and age profile, it was expected that Western Power would have been replacing wood poles at rates that reflects the average service life of these wood poles (35 to 50 years) and the number of poles in the networks. As already noted, this is not happening.*

*"Credible pole replacement rates for Western Power's network with 689,000 wood poles would typically be in the range of 13,800 to 27,500 poles per annum."*

- 3.24 The 2006 Audit recommended that Western Power should increase its rates of wooden power pole replacements by at least ten times its historical average rate of replacement. The Committee notes that, according to EnergySafety's 2006 Audit, in the 12 months prior to 30 April 2006, Western Power had replaced 1,672 wooden power poles.<sup>36</sup> EnergySafety expressed the view in the 2006 Audit that; "*Credible pole replacement rates for Western Power's network with 689,000 wood poles would typically be in the range of 13,800 to 27,500 poles per annum.*"<sup>37</sup> EnergySafety's recommendation about the range of credible wooden power pole replacements would not have addressed any wooden pole replacement backlog. However, it would have brought Western Power's wooden power pole replacement practices within the bounds of industry standards, and would at least have had the virtue of being "*credible*".<sup>38</sup> This is because while a credible wooden power pole replacement rate would have met

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<sup>34</sup> *Ibid*, p27.

<sup>35</sup> *Ibid*, p23.

<sup>36</sup> *Ibid*, p3.

<sup>37</sup> *Ibid*, p4.

<sup>38</sup> *Id.*

current replacement needs, it would not have addressed the accrued backlog of poles that ought reasonably to have been replaced in previous years.

- 3.25 A further concern expressed by EnergySafety in the 2006 Audit was that Western Power appeared, at this time, to have no wooden power pole replacement plan beyond the replacement of those wooden power poles that were condemned in the course of wooden power pole inspections. To the extent that wooden power poles were also being replaced by Western Power at the point of total structural failure,<sup>39</sup> it is unclear to the Committee whether or not such replacements could reasonably be characterised as being in any sense “planned”.
- 3.26 Where wooden power poles were actually being replaced by Western Power, the 2006 Audit found that Western Power’s DFMS database contained inadequate information to provide the basis for either informed asset planning with respect to older wooden power poles, or factors relevant to questions of serviceability, such as location-specific variables as they related to individual wooden power poles. Specifically, the Committee notes the following observations from the 2006 Audit:<sup>40</sup>

*The audit did not discover any systematic reporting and recording of the pole replacement field activity in Western Power’s asset database.*

...

*The audit did discover that the asset database did not retain the ‘history’ of the poles (and other assets) replaced due to failure or condition, which makes the tracking of the replacement activity extremely difficult.*

- 3.27 The Committee notes that EnergySafety, in the 2006 Audit, found no evidence of “any structured or systematic review of the pole replacement management, nor records that show Western Power is routinely monitoring and reporting on the pole replacement activity.” And that no “quality assurance/controls were found relating to the pole replacement field activity.”<sup>41</sup>

*... it would have been entirely reasonable for Western Power to form the view that its wooden power pole replacement program was a high-priority safety and compliance issue ...*

<sup>39</sup> Wilson Cook, [Review of Western Power’s Expenditures for Second Access Arrangement](#). May 2009, p55.

<sup>40</sup> Department of Commerce, EnergySafety, *Western Power’s Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p21.

<sup>41</sup> *Id.*

- 3.28 The Committee has formed the view that the above findings by EnergySafety in 2006 relating to Western Power’s wooden power pole replacement systems, processes and practices provided Western Power with both a baseline from which to monitor future progress, and a strong signal about the imperative for remedial action. On the basis of such a finding, the Committee believes that it would have been entirely reasonable for Western Power to form the view that its wooden power pole replacement program was a high-priority safety and compliance issue. As will be discussed later in this Report, (see for example, paragraph 8.42 below) the Committee was troubled to learn in late 2011 that, it was only in 2011 that Western Power’s rate of wooden power pole replacements entered the range that EnergySafety described in 2006 as being “credible”.

### Wooden Power Pole Asset Management Systems

- 3.29 The Committee observes that, in its 2006/07 Annual Report, Western Power disclosed that its “Substation plant, overhead lines and cables” were being depreciated on a 40-50 year basis for the purpose of its financial statements.<sup>42</sup> The Committee notes that this may be at variance with the information contained in Western Power’s 2003 internal “Networks pole Inspection Manual: Asset Strategy 2003” which states:<sup>43</sup>

*Wooden poles have an average life expectancy of between 25-30 years, though this figure can be increased by pole reinforcement at the ground line, as well as by chemical treatment.*

*Western Power does not have adequate compliance management systems that will ensure compliance of its wood pole asset management systems and processes with the Regulations ...*

- 3.30 The Committee further notes that, in a submission to the ERA at the end of 2009, Western Power stated that, as at 30 June 2006, its wooden pole distribution network had an average economic life of 14.5 years.<sup>44</sup> This estimate did not differentiate between treated, or untreated wooden power poles. This should be compared with the findings of EnergySafety’s finding in the 2006 Audit which indicated that “the best (and only) estimate of the average age of the poles in Western Power’s networks is in

<sup>42</sup> Western Power, [Annual Report 2006/07](#), August 2007, p76.

<sup>43</sup> At p1-1.

<sup>44</sup> Western Power (2009) [Draft Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network. Appendix A: Target Revenue Calculation \(Revenue Model\)](#). Submitted to ERA. Perth, Western Australia, 16 July 2009. See table headed: “Western Power Revised Access Arrangement 2 DD2 Real Pre-tax Model” at page 1 of 20.

*the order of 32-33 years.*<sup>45</sup> This estimate was provided to EnergySafety, in response to a request for details from Western Power, by means of a handwritten document.<sup>46</sup>

- 3.31 Prudent financial management of Western Power's distribution network asset base would presumably require that depreciation and, where necessary, revaluation of non-current assets, comply fully with relevant professional and regulatory guidelines including applicable accounting standards, such as applied during the 2006-2007 financial year, by virtue of the then requirements of AASB 116 *Property, Plant and Equipment*.<sup>47</sup> It is unclear to what extent that Western Power's wooden power pole asset management systems in 2006 readily facilitated the Board's compliance with these professional and regulatory requirements. EnergySafety's 2006 Audit findings with respect to Western Power's wooden power pole asset management systems do not provide further assurance on this point. With respect to regulatory compliance, and compliance with relevant professional standards, EnergySafety specifically observed that:<sup>48</sup>

*Western Power does not have adequate compliance management systems that will ensure compliance of its wood pole asset management systems and processes with the Regulations, nor does it currently have a plan to develop and implement a comprehensive compliance management plan and systems.*

*The Committee remains uncertain of the significance of this declaration, if any, to the question of network wooden power poles given that identical wording has been adopted from year to year in the Annual Report*

- 3.32 The Committee notes that the Directors' Report in the April-June 2006 inaugural Annual Report for Western Power, as it is currently constituted, contained the following qualification:

*LIKELY DEVELOPMENTS AND EXPECTED RESULTS OF OPERATIONS*

<sup>45</sup> Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p17.

<sup>46</sup> *Ibid*, p23.

<sup>47</sup> See: [www.aasb.gov.au/admin/file/content105/c9/AASB116\\_07-04\\_COMPapr06.pdf](http://www.aasb.gov.au/admin/file/content105/c9/AASB116_07-04_COMPapr06.pdf). (Accessed 20 October 2011).

<sup>48</sup> Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p4.

*Likely developments in the operations of the Corporation that were not finalised at the date of this report included:*

...

- *The Corporation has committed to a significant capital investment program in order to meet its safety, reliability and efficiency requirements. The Corporation is reliant on debt funding from the shareholder in order to meet these and any additional regulatory requirements.*

*The Directors have not included in this report any further information on the likely developments in the operations of the Corporation and the expected results of those operations in future years as they believe it would be likely to disadvantage the Corporation.*

- 3.33 A statement in similar terms has appeared in the Directors' Report in each of the subsequent Annual Reports for Western Power since June 2006. No additional clarifying information is provided in the 'Notes' to any of the published financial statements for Western Power to explain the import of this qualification as it applies either generally, or with respect to wooden power pole asset management in particular. The Committee remains uncertain of the significance of this declaration, if any, to the question of network wooden power poles given that identical wording has been adopted from year to year in the Annual Report.

### Wooden Pole Inspections

*"They hit the pole to hear if it sounds solid, and dig down and drill into the pole above the ground and below the ground and check on the good wood that is in there."*

- 3.34 EnergySafety's 2006 Audit findings about Western Power's wooden power pole inspection processes raised issues about a number of matters, which were subsequently analysed in EnergySafety's 2008 Audit, as follows:<sup>49</sup>

1. *The underlying principles in the sound-dig-and-drill pole inspection practice employed by Western Power.*
2. *The 'good wood' serviceability criteria employed.*

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<sup>49</sup> Department of Commerce, EnergySafety, 2008 Distribution Wood Pole Audit Review, May 2009, p25.

3. *The less than adequate management of:*
  - i. *The inspection program. A substantial backlog of poles has not been inspected.*
  - ii. *The inspection quality. Contractors have been allowed to use unauthorised inspectors and to avoid the requirement to dig down to inspect poles below the ground line.*
  - iii. *Pole inspector competence. No continuing assessment, appropriate follow-up action or retraining has occurred.*
4. *The absence of any stay inspection.*
5. *Less than the required pole embedment of between 0.3 and 0.5 meters.*
6. *The absence of any management system to ensure unserviceable poles and stays were replaced, repaired, or reinforced in a timely way.*

*“Sound-Dig-and-Drill” & “Good Wood” Serviceability Criteria*

- 3.35 EnergySafety’s 2006 Audit reviewed the methodology used by Western Power to assess the serviceability of in-service wooden power poles. This methodology is known as “*sound-dig-and-drill*”.<sup>50</sup> One witness before the Committee described the method in the following terms:<sup>51</sup>

*They hit the pole to hear if it sounds solid, and dig down and drill into the pole above the ground and below the ground and check on the good wood that is in there.*

*A disadvantage of the boring method is that if too many holes are bored close together the pole will be significantly weakened ...*

- 3.36 Reference to the 2003 version of Western Power’s “*Networks Pole Inspection Manual*” describes the wooden power pole inspection process as follows:<sup>52</sup>

<sup>50</sup> Department of Commerce, EnergySafety, *Western Power’s Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p16.

<sup>51</sup> Mr Ken Bowron, Executive Director, EnergySafety, *Transcript of Evidence*, 19 August 2009, p8.

<sup>52</sup> Western Power (2003) *Networks Pole Inspection Manual: Asset Strategy*. April, from para 9.2.3.

*The sounding test consists of striking the pole in a number of locations with a hammer or the back of an axe. Poles in good condition, have a solid ring, whereas those containing advanced decay, pipes or internal checks (cracks) sound hollow, dull or flat.*

- 3.37 The 2003 Western Power inspection manual proceeds to explain that, once a suitable excavation is made at the base of the wooden power pole:<sup>53</sup>

*Inspection holes are to be bored to the centre of the pole using a 12mm diameter auger and suitable power drill, although a hand brace could be used. The holes are bored at a downward angle as follows:*

- *Holes starting at 100mm and 1000mm above ground are to be bored at a slight downward angle between 5 degrees and 15 degrees.*
- *Holes bored from 100mm from below the ground are to be bored at a downward angle of 45°.*
- *Rot is particularly likely to occur at 200 to 300 mm below the ground and a hole drilled at 45° from 100mm below ground should ensure that any rot in this area is detected.*

*Where there is external rot below the groundline the decayed material should be removed before the inspection hole starting at 100mm below ground is bored. This will ensure that the depth of sound wood measured at the above ground hole does not include any external decayed wood.*

*“... it is not a matter of continuing to drill more and more holes over many years until you have got a piece of Swiss cheese which is obviously going to be weakened.”*

- 3.38 Thereafter, a judgement is formed about the depth of sound wood along the length of the test holes, to determine the extent of sound wood remaining.<sup>54</sup> This is referred to in the 2008 Audit as the “good-wood” serviceability criteria. The Committee notes that the 2003 version of the Western Power inspection manual makes the following

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<sup>53</sup> *Ibid*, para 9.8.

<sup>54</sup> *Ibid*, para 9.11.



cautionary observation regarding the wood boring element of the sound-dig-and-drill inspection methodology:<sup>55</sup>

*A disadvantage of the boring method is that if too many holes are bored close together the pole will be significantly weakened, especially as most holes are required in the vicinity of the groundline, where there is the greatest likelihood of internal rot but where the greatest strength is required.*

- 3.39 Notwithstanding this cautionary remark, the 2006 Audit indicated that Western Power advised EnergySafety as follows:<sup>56</sup>

*Untreated poles are drilled and inspected at 4 years, 8 years and 12 years after they are installed. Treated poles are drilled and inspected at 8 years and 12 years after they are installed. No additional holes are drilled beyond 12 years and subsequent strength assessments are based on probing the previously drilled test holes to establish the remaining good wood, from which the pole strength is then assessed.*

*the 2006 Audit did not support Western Power's approach to the assessment of the serviceability of its wooden power pole asset base.*

- 3.40 The issue of the potential of the “sound-dig-and-drill” testing methodology to actually weaken the poles that it was designed to test, was raised by the Committee during its first public hearing with Western Power as follows:<sup>57</sup>

**Hon ED DERMER:** *Is Western Power aware of a suggestion that the practice of boring holes into the wood actually compromises the strength of the pole?*

**Mr Aberle:** *Yes, we are and we know where it comes from. We are aware that there has been a suggestion to that effect. However, we also are in contact with all of our brother utilities around the country and that is by far the most commonly used technique. What we have done is refine it. We believe that risk is less than the risk of not doing an inspection with the thoroughness that that supports you to do.*

<sup>55</sup> *Ibid*, para 9.7.

<sup>56</sup> Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p16.

<sup>57</sup> Mr Doug Aberle, Managing Director, and Mr Mark de Laeter, General Manager, Networks, Western Power, *Transcript of Evidence*, 9 November 2011, p11.

**Mr de Laeter:** *If I may add to that, it is recognised across the industry as one of the disadvantages of the sound, dig and drill method. ... So it is recognised nationally, we recognise it as a challenge, we would like to have moved to a point where we do not drill any holes in the poles, and we have certainly deferred our first inspection approach accordingly. It is a problem we share with the industry and it is a problem we are working on with the industry.*

...

**Hon ED DERMER:** *So currently today when your inspection teams are out inspecting poles, they are not drilling holes—is that what you are telling me?*

**Mr Aberle:** *Well, sometimes they are because there is not one there already, but all I am saying is it is not a matter of continuing to drill more and more holes over many years until you have got a piece of Swiss cheese which is obviously going to be weakened. I just wanted to be clear about that.*

- 3.41 In response to a question on notice from the same hearing, Western Power has advised the Committee that; *“As per Western Power’s Wood Pole Inspection Procedure process, the maximum number of inspection holes Western Power allows to be drilled in a pole is 13.”*<sup>58</sup>

*... prior to disaggregation and reconstitution into its current corporate form, Western Power was made aware of the limitations of the serviceability assessment practices it applied to its wooden power pole asset base.*

- 3.42 The Committee notes that the 2006 Audit did not support Western Power’s approach to the assessment of the serviceability of its wooden power pole asset base. In part, this was because, in EnergySafety’s view, Western Power’s *“pole inspection and strength assessment activity is concentrated in the early life of the poles rather than later when the poles have deteriorated, are weaker and more likely to fail.”*<sup>59</sup> In addition, the 2006 Audit found that the ‘good-wood’ serviceability criteria:<sup>60</sup>

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<sup>58</sup> Letter from Mr Doug Aberle, Managing Director, Western Power “*Response to Questions on Notice*”, 18 November 2011, p6

<sup>59</sup> Department of Commerce, EnergySafety, *Western Power’s Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p16.

<sup>60</sup> *Id.*

*... takes no account of the actual power lines and other equipment installed and the real wind and other loads imposed on the pole as specified in HB C(b)1. ... The companion criteria for assessing the serviceability of reinforced poles are similarly flawed*

- 3.43 The 2006 Audit indicated that, prior to disaggregation and reconstitution into its current corporate form, Western Power was made aware of the limitations of the serviceability assessment practices it applied to its wooden power pole asset base. In its prior corporate form, Western Power had commissioned a report in 1994 which found that “with a 50mm ‘good wood’ criteria, the proposed inspection practice would only identify ~17% of the unserviceable poles examined.”<sup>61</sup> The Committee notes that the 2006 Audit found no evidence that Western Power had acted upon its own 1994 report findings to deliver a more acceptable wooden power pole serviceability assessment criteria.<sup>62</sup>
- 3.44 The 1994 report referred to in the previous paragraph was known to Western Power’s senior management in 2006, some of whom had occupied similar roles in Western Power prior to disaggregation.<sup>63</sup> As at the date of this Committee’s Report, more than 17 years after the internal Western Power report, and more than five years after EnergySafety’s 2006 Audit, it appears to the Committee that Western Power still lacks an appropriate serviceability index with which to accurately assess the condition of its in-service network wooden power poles.<sup>64</sup>

*... more than 17 years after the internal Western Power report, and more than five years after EnergySafety’s 2006 Audit, it appears to the Committee that Western Power still lacks an appropriate serviceability index ...*

#### *Wooden Power Pole Inspection Program Management*

- 3.45 The Committee notes EnergySafety’s summary evaluation of the wooden power pole inspection regime from the 2006 Audit was in the following terms:<sup>65</sup>

*In summary the current pole inspection and remaining strength assessment practices:*

<sup>61</sup> *Id.*

<sup>62</sup> Referred to *Ibid*, p17.

<sup>63</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 9 November, p3.

<sup>64</sup> Mr Mark de Laeter, General Manager, Networks, Western Power, *Transcript of Evidence*, 9 November, p3.

- *do not reliably identify the unsound poles to an acceptable level of confidence,*
- *may not identify the presence of brittle wood in the poles that have been in service for more than 15-25 years*
- *may be falsely based on higher timber strengths than actually exist,*
- *do not recognise actual numbers of conductors and other loads that should be considered in assessing the factors of safety, and*
- *do not establish the real remaining factors of safety of the poles when they are inspected.*

3.46 In addition, EnergySafety's 2006 Audit raised questions about the extent to which Western Power's wooden power pole inspectors were actually applying the inspection methodology stipulated in Western Power's own 2003 Networks Pole Inspection Manual.<sup>66</sup>

*From a small sample of 20 'sound' wood pole tests performed in June 2006, only one pole butt had been exposed for the below ground test. Thirteen pole butts had clearly not been exposed to measure the below ground good wood reported. Two above ground good wood reports had clearly not been tested as reported because of vegetation in one case and no test hole and plug in the other. Four sound wood reports may have been performed as reported, but the evidence at the pole butt was not conclusive.*

*... most of the wooden power poles in the Western Power asset base may not have been inspected in the previous four year period.*

3.47 Of further concern to this Committee was the observation by EnergySafety, based on a field audit of 500 statistically sampled wooden power poles, that most of the wooden power poles in the Western Power asset base may not have been inspected in the previous four year period.<sup>67</sup>

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<sup>65</sup> Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p17.

<sup>66</sup> *Ibid*, p18.

<sup>67</sup> *Ibid*, p25.

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*... it appears (with a high level of confidence) that an inspection backlog of almost 600,000 poles has developed over the last 4 years*

*The field audit data gathered also suggests that some poles have not been inspected since the current inspection practice was implemented in 1994, which is a very serious concern in respect of public safety.*

- 3.48 A separate interrogation of Western Power's DFMS records by EnergySafety, placed the extent of the inspection backlog at 215,000 wooden power poles.<sup>68</sup> Whatever the actual size of the wooden power pole inspection backlog at the time of the 2006 Audit, the Committee notes that it was clear that an unacceptable proportion of Western Power's wooden power pole asset base had not been inspected in the four-year inspection cycle. As the 2006 Audit observed:<sup>69</sup>

*Poles that no longer have the necessary strength and factors of safety for them to remain in service for a further period should be either reinforced or replaced, depending on their strength and condition. Similarly, the stays and ground anchors that no longer have the required minimum strength should also be replaced. The serviceability criteria used to decide which poles (and stays) should be replaced and those that may be reinforced are critical to the structural adequacy and safety of the poles that remain in service in the network.*

- 3.49 Serviceability criteria and adequate wooden power pole embedment are inherently linked to the inspection process. In its 2006 Audit, EnergySafety expressed concerns about both the sound-dig-and-drill inspection methodology and the good-wood serviceability criterion that were being used by Western Power as the assessment criteria being used by inspectors to determine wooden power pole serviceability. This was because, in EnergySafety's view, while the practice may provide some localised indication of the *condition* of the wooden power pole in question, it did not effectively assess the *strength* of poles in the safety-critical zone below ground.<sup>70</sup>

*... while the practice may provide some localised indication of the condition of the wooden power pole in question, it did not effectively assess the strength of poles in the safety-critical zone ...*

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<sup>68</sup> *Ibid*, p26.

<sup>69</sup> *Ibid*, p8.

<sup>70</sup> *Ibid*, p18.

- 3.50 Given that Western Power's own inspection manual conceded that the drill element of the methodology could, itself, contribute to wooden power pole structural weakness, EnergySafety's concerns in this regard appear to the Committee to have been reasonable in all the circumstances. However, the Committee also accepts the premise underlying EnergySafety's concerns, namely: that assessing the actual serviceability of individual wooden power poles from time to time (whether reinforced or not), is the crucial safety consideration.
- 3.51 Of further relevance to the question of wooden power pole serviceability is the matter of adequate wooden power pole embedment. The 2006 Audit indicated that the 500 wooden power pole field survey, conducted by EnergySafety, discovered that the wooden power poles surveyed were not embedded to the depths required by the relevant standard.<sup>71</sup> As the 2006 Audit went on to discuss:<sup>72</sup>

*This less than required pole embedment is significant. The average 0.4 m discrepancy for an 11.0 m pole represents 25% of the required depth; that is these poles are on average only buried to only 75% of the required depth. Similarly, the 0.3 m discrepancy for a 9.5 m pole represents 20% of the required depth; that is these poles are on average buried to only 80% of the required depth.*

*The consequence of this consistently less than the required embedment is that the windage on the poles and lines will be greater because the poles are higher above the ground than they should be. This in turn increases the ground-line bending load on these poles with an increased potential for pole failure. The second consequence is that the reduced depth will reduce the ground footing resistance and the poles capacity to resist the bending moment.*

*There are very few pole failures where the pole fell over without breaking indicating the first failure mechanism in the paragraph above is the more important.*

*Western Power appeared to lack a management system that could adequately ensure that those wooden power poles which were identified... as being unsafe, were actually reinforced or replaced within a reasonable period of time.*

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<sup>71</sup> HB C(b)1 - 1999 "Guidelines for design and maintenance of overhead distribution and transmission lines". Now known as AS/NZS 7000:2010 "Overhead line design - Detailed procedures".

<sup>72</sup> *Ibid*, p28.

- 3.52 EnergySafety, in its 2006 Audit, also observed that Western Power appeared to lack a management system that could adequately ensure that those wooden power poles which were identified in the course of wooden power pole inspections as being unsafe, were actually reinforced or replaced within a reasonable period of time.
- 3.53 The Committee has formed the view that the above findings by EnergySafety in 2006 relating to Western Power's wooden power pole and reinforcement inspection systems, processes and practices provided Western Power with both a baseline from which to monitor future progress, and a strong signal about the imperative for remedial action. On the basis of such a finding, the Committee believes that it would have been entirely reasonable in 2006 for Western Power to form the view that its wooden power pole and reinforcement inspection program was a high-priority safety and compliance issue.

*... it would have been entirely reasonable in 2006 for Western Power to form the view that its wooden power pole and reinforcement inspection program was a high-priority.*

### Unassisted Wooden Power Pole Failures in the Rural Network

- 3.54 After reviewing the available data from Western Power's wooden power pole asset management records, EnergySafety, in its 2006 Audit, found that a pattern had emerged whereby, in the rural network, the majority of wooden power pole failures involved wooden power poles that:<sup>73</sup>
- Were untreated jarrah;<sup>74</sup>
  - Were between 30 and 60 years old;<sup>75</sup>
  - Did not meet the design standards when they were installed;<sup>76</sup>
  - Were not supported by stays or conductors transverse to the power lines that would support these poles against the forces from wind pressure on the poles, conductors and other pole top hardware;<sup>77</sup>
  - Were the same age, species, timber treatment, size and strength as many of the poles in the general area;<sup>78</sup>

<sup>73</sup> Department of Commerce, EnergySafety, (2009) [\*Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009\*](#), 29 September, 2009, p1.

<sup>74</sup> Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p17.

<sup>75</sup> *Id.*

<sup>76</sup> *Ibid*, p24.

<sup>77</sup> *Ibid*, p25.

<sup>78</sup> *Id.*

- Western Power had found no prior evidence of internal rot and loss of pole strength in these untreated jarrah rural poles, even though they were more than 30 years old;<sup>79</sup> and,
- Were in rural locations where the risk of ground fires, damage to property and life are high through the dry summer months.<sup>80</sup> (See paragraphs 5.39 and 5.121 above).

3.55 The relevant Australian Standards for the natural durability of timber indicated that the in-ground natural durability/probable life expectancy of untreated, unreinforced round jarrah poles is between 15 and 25 years.<sup>81</sup> This life expectancy can be extended under the terms of the relevant industry standards, by means of a suitable wooden power pole reinforcement system, to between 40 and 50 years.

3.56 The Committee notes that, at the time of the 2006 Audit, EnergySafety lacked sufficient regulatory powers to ensure that Western Power was required to rectify the inadequacies identified in the 2006 Audit report. However, it is now a matter of public record that EnergySafety conducted a follow-up audit on Western Power's distribution wooden power poles in 2008. The findings of this follow-up audit were published by EnergySafety in May 2009, and are discussed in Part 5 of this Report below.

### Auditor General's Response

3.57 Notwithstanding the concerns raised by EnergySafety in its 2006 Audit, particularly regarding Western Power's wooden power pole asset management systems, Western Power received unqualified audits from the Office of the Auditor General for Western Australia in each of the financial years 2005/2006, and 2006/2007. As at the date of this Report, the Office of the Auditor General has published no report on the compliance aspects of Western Power's asset management systems.

*... the Office of the Auditor General has published no report on the compliance aspects of Western Power's asset management systems.*

3.58 It is of significant concern to this Committee that the Office of the Auditor General has published no compliance-related performance audit report on any aspect of Western Power's asset management systems since 2006, despite the repeated adverse

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<sup>79</sup> *Ibid*, p24.

<sup>80</sup> *Ibid*, p25.

<sup>81</sup> Australian Standard AS5604—2005 “*Timber—Natural durability ratings*”, at p15. See also Australian Standard AS2209—1994 “*Timber—Poles for overhead lines*” and AS 1720.2 – 1990 “*Timber structures – Timber properties*”.



findings of both EnergySafety and the ERA with respect to Western Power's asset management practices.

- 3.59 When the Committee raised this issue with the Auditor General, the following explanation was forthcoming:<sup>82</sup>

*An audit of Western Power and Horizon's management of their Wood Pole Assets was considered in 2009 but was deferred for 18 months for various reasons, including Western Power receiving additional funding for power pole replacement.*

*In late 2010 the audit process was restarted. Western Power and Horizon were formally advised of this decision and of the audit objective and scope in February 2011. However, the audit was again deferred when we became aware of the Public Administration Committee's enquiry and of its terms of reference.*

*... the Auditor General has chosen to characterise Western Power's regulatory non-compliance as a "difference of opinion" or "debate" between EnergySafety and Western Power, rather than a potential compliance failure ...*

- 3.60 In addition, the Committee notes that the Auditor General has chosen to characterise Western Power's regulatory non-compliance as a "difference of opinion" or "debate" between EnergySafety and Western Power, rather than a potential compliance failure, as occurred in the following exchanges during evidence before the Committee:

***The CHAIRMAN:** I don't think the members here are going to argue about the financial aspects.*

***Mr Murphy:** That is fine. I guess the financial audit is not going to get to the heart of the issue that you are talking about. Certainly a performance audit would be needed to examine the sorts of issues that you talked about. We met with the office of EnergySafety. We are aware of their concerns. We have certainly had a look at what appears to be a very public difference of opinion between Western Power and the office of EnergySafety, fundamentally about the*

<sup>82</sup> Tabled Document Ref: 28/09/11 from Mr Colin Murphy, Auditor General for Western Australia, tabled 28 September 2011, p3.

*inspection and maintenance regime of power poles, and have had that on our topic selection for a performance audit over that period.”<sup>83</sup>*

**“Hon ED DERMER:** *What we are talking about is the responsibility for their assets which potentially are a public danger.*

**Mr Murphy:** *Absolutely. To me that is the debate that I have observed between EnergySafety and Western Power and there is a significant difference in view between those two bodies on the current state of the poles and the maintenance regime. It would require a performance audit to get to the bottom of that.”<sup>84</sup>*

- 3.61 By the Auditor General’s own assessment, it would take “*a performance audit to get to the bottom of*” the “*debate*” between EnergySafety and Western Power. The Committee is concerned that no such performance audit was conducted by the Office of the Auditor General, either immediately following the publication of EnergySafety’s 2006 Audit report, or subsequently. That the Auditor general should have unilaterally decided to defer any such inquiry because a Parliamentary committee was inquiring into the matter is regrettable. At the very least, this Committee would have expected the Auditor General, as a statutory officer of the Parliament, to have consulted with the Committee prior to making such a decision.
- 3.62 It is also of significant concern to this Committee that the Auditor General has chosen to characterise serious, persistent *prima facie* compliance breaches by Western Power as a “*difference of opinion*” or “*debate*” between EnergySafety and Western Power. The Committee notes that this is not the perspective adopted by the Auditor General with respect to any of the compliance-related reports that he has published in relation to other public sector entities, such as the recent “*Ensuring Compliance with Conditions on Mining*” Report published by the Office of the Auditor General in September 2011.<sup>85</sup> The Committee is mindful that safety compliance with respect to electricity transmission and distribution is, quite literally, a matter of life and death.

*Since its hearing with the Auditor General in September 2011, the Committee understands that the Office of the Auditor General has commenced a performance audit of Western Power.*

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<sup>83</sup> Mr Colin Murphy, Auditor General for Western Australia, *Transcript of Evidence*, 28 September 2011, p3.

<sup>84</sup> *Ibid*, p5.

<sup>85</sup> Office of the Auditor General, (2011) “[\*Ensuring Compliance with Conditions on Mining\*](#)”. Report 8 – September 2011.

- 3.63 On this basis, the Committee is of the view that, on any fair assessment, Western Power had a *prima facie* case to answer for alleged regulatory breaches. Such obligations do not amount to a “*dispute*” or “*debate*”.
- 3.64 Since its hearing with the Auditor General in September 2011, the Committee understands that the Office of the Auditor General has commenced a performance audit of Western Power.

**4 ERA'S 2009 SECTION 32 - ELECTRICITY INDUSTRY ACT 2004 NOTICE ON WESTERN POWER**

- 4.1 On 8 January 2009 the ERA served the 2009 Notice of Compliance Failure on Western Power. Part 7 of this Notice issued by the ERA, headed "*Contravention of clause 19 of Distribution Licence Number (EDLI)*"<sup>86</sup> appears to provide a strong endorsement of the concerns expressed in EnergySafety's 2006 Audit. Clause 19(1) of Western Power's contemporary Electricity Distribution Licence provided as follows:<sup>87</sup>

*The licensee must provide for, and notify the Authority of, an asset management system in relation to the distribution system within 2 business days from the commencement date or from the completion of construction of the distribution system, whichever is later.*

*Part 7 of this Notice issued by the ERA ... appears to provide a strong endorsement of the concerns expressed in EnergySafety's 2006 Audit.*

**Part 7**

- 4.2 The relevant text of Part 7 of the ERA's 2009 Notice of Compliance Failure is reproduced in the following extract.<sup>88</sup> In each case, the references in the following extract appear to relate to Western Power's "*Asset Management System - the ERA Assessment Report.*" (**2008 Asset Management Report**):<sup>89</sup>

7.1 *The asset management system is defined in the Distribution Licence as "the measures that are to be taken by the licensee for the proper maintenance, expansion or reduction of the distribution system". The asset management report discloses a number of deficiencies with the Electricity Networks Corporation's asset management system for its distribution system. In the Authority's opinion, some of the deficiencies disclosed in the asset management report are such that the Authority does not consider that the Electricity Networks*

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<sup>86</sup> *Ibid*, p4.

<sup>87</sup> Clause 19 referred to *ibid*, is essentially equivalent in content to Clause 20 of Western Power's current Transmission and Distribution Licences ([http://www.erawa.com.au/2/245/51/electricity\\_licensing\\_licence\\_holders.pm#W](http://www.erawa.com.au/2/245/51/electricity_licensing_licence_holders.pm#W)). Accessed 24 October 2011).

<sup>88</sup> Economic Regulation Authority (2009) "SECTION 32 - "[Western Power - Electricity Industry Act 2004: Notice of Failure to Comply with Licence](#)" 8 January 2009, at p5.

<sup>89</sup> Western Power (2008) [Asset Management System - the ERA Assessment Report](#). Lloyds Register. 1 October 2008.

*Corporation's asset management system puts in place measures for the proper maintenance of the distribution system. In particular:*

*"... the Authority does not consider that the Electricity Networks Corporation's asset management system puts in place measures for the proper maintenance of the distribution system."*

- 7.1.1 There is a backlog of 73,000 poles which have not been inspected in the last 5 years (page 51 and page 72 – finding 24);*
- 7.1.2 There is a backlog of 3,500 condemned poles on the network (page 52 and page 72 – finding 24);*
- 7.1.3 The "Corporate Risk Database" does not contain all risks rated "Extreme" but only the top ten risks for each branch (page 62 and page 73 – finding 25);*
- 7.1.4 The condition of distribution assets is not well documented leading to reactive or imprecise systems for maintenance (page 53 and page 72 – finding 22);*
- 7.1.5 There is a lack of understanding of key processes in Electricity Networks Corporation with respect to operational and capital expenditure works programmes (page 4 and pages 69 – 70 – finding 19); and*
- 7.1.6 The extension of asset lives and moving of expected replacement date into the future where accurate condition information is not available, meaning that those assets are likely to fail before the extended end of life is reached (page 4, pages 40 – 41 and page 71 – finding 21).*

- 4.3 One of the more concerning aspects of Part 7 of the ERA's 2009 Notice of Compliance Failure, as far as it related to Western Power's Asset Management System, is that it strongly suggests that Western Power had made inadequate progress with respect to its wooden power pole asset management systems, processes and practices, since the EnergySafety 2006 Audit. This is despite the effluxion of more than two years since the publication of EnergySafety's 2006 Audit.*

## Background

- 4.4 By way of background, an “*Electricity Distribution Licence (EDLI) Performance Audit Report*” (**2008 Western Power Licence Report**), was prepared for Western Power, and submitted to the ERA in November 2008.<sup>90</sup> This 2008 Western Power Licence Report rated Western Power’s “*Asset Management System*” as “*Compliant with no further action required to maintain compliance*”.<sup>91</sup> This is how the present, so-called “*Propose - Respond*” regulatory model operates, with respect to the asset management systems and operating licences of electricity and gas utilities.
- 4.5 The same overall compliance rating was applied to Western Power’s distribution asset management system, by the same performance auditor in May 2010.<sup>92</sup> However, in 2010, this reviewer which in 2008 had assessed Western Power’s “*Adequacy of existing controls*” as “*Strong*”, formed the view that this performance measure had deteriorated to “*Moderate*”.<sup>93</sup>

## 2009 Notice of Compliance Failure versus 2008 & 2010 Western Power Licence Reports

- 4.6 A direct comparison of the global asset management system assessments in both the 2008 Western Power Licence Report and the 2010 “*Electricity Distribution Licence (EDLI) Performance Audit Report*” (**2010 Western Power Licence Report**). is reproduced in the following table:<sup>94</sup>

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<sup>90</sup> Western Power (2008) [Electricity Distribution Licence \(EDLI\) Performance Audit Report](#). Ernst & Young, November 2008.

<sup>91</sup> *Ibid*, at pp11 and 25.

<sup>92</sup> Western Power (2008) [Electricity Distribution Licence \(EDLI\) Performance Audit Report](#). Ernst & Young, November 2008, at p11; and, Western Power (2010) [Electricity Distribution Licence \(EDLI\) Performance Audit Report](#). Ernst & Young, 11 May 2010, at p32.

<sup>93</sup> Western Power (2010) [Electricity Distribution Licence \(EDLI\) Performance Audit Report](#). Ernst & Young, 11 May 2010, at p32.

<sup>94</sup> Western Power (2008) [Electricity Distribution Licence \(EDLI\) Performance Audit Report](#). Ernst & Young, November 2008, at p11; and, Western Power (2010) [Electricity Distribution Licence \(EDLI\) Performance Audit Report](#). Ernst & Young, 11 May 2010, at p32.

	Licence Condition	Licence obligation	Likelihood	Consequence	Inherent risk	Adequacy of existing controls	Compliance Rating	Descriptor
2008	19	Asset Management System	Unlikely	Minor	Low	Strong	5	Compliant with no further action required to maintain compliance
2010	19	Asset Management System	Likely	Moderate	High	Moderate	5	Compliant with no further action required to maintain compliance

- 4.7 As noted below at paragraphs 5.77, 7.13 and 7.19, neither the 2008 or 2010 Western Power Licence Reports submitted to the ERA make any reference to EnergySafety's adverse findings contained in either of its 2006 Audit or 2008 Audit documents, regarding Western Power's distribution asset management systems.

*... there is an apparent lack of fit between ... Western Power's asset management, and licence performance review audits ... and the ERA's 2009 Notice of Compliance Failure ... together with the various findings of EnergySafety ...*

- 4.8 The Committee has formed the view that there is an apparent lack of fit between the outcomes of Western Power's asset management, and licence performance review audits (on the issue of asset management) on the one hand, and the ERA's 2009 Notice of Compliance Failure at Part 7, together with the various findings of EnergySafety on the other. ERA's subsequent 2009 Notice of Compliance Failure, at Part 7 suggests strongly that the ERA was more inclined to the views of EnergySafety on this question. It is a weakness of the current regulatory review system that, while the ERA publishes all of the proposed regulatory assessments it receives from operators, detailed responses from the ERA, other than formal compliance notices, are not also published to enable informed readers to gain an appreciation of the regulator's detailed assessments of such reviews.

- 4.9 The Committee notes that the serving of the 2009 Notice of Compliance Failure indicates that the 2010 Western Power Licence Report's global assessment of "*Compliant, with no further action to maintain compliance*", was completely at odds with the assessments of both of Western Power's principal regulators. This raises the question as to whether the 2010 Western Power Licence Report was actually fit for purpose with respect to its assessment of Western Power's Asset Management System. Given that the 2008 Western Power Licence Report was even more positive than the 2010 report in this respect, the question of fitness for purpose appears to be equally applicable to the 2008 Western Power Licence Report.

*This raises the question as to whether the 2010 Western Power Licence Report was actually fit for purpose with respect to its assessment of Western Power's Asset Management System.*

- 4.10 Indeed, this Committee has significant concerns that ERA's regulatory findings in early 2009 were so at odds with the findings of Western Power's three consultant reviewers in 2008. One of these Western Power reviewers gave Western Power's Asset Management System "*a Green rating with no deficiencies*";<sup>95</sup> the second of these reviewers gave Western Power's asset management system a preponderance of "*Good*" or "*Adequate*" ratings;<sup>96</sup> and the third reviewer assessed Western Power's asset management system as; "*Compliant with no further action required to maintain compliance.*"<sup>97</sup> This raises further serious questions about the adequacy of the current "*Propose - Respond*" regulatory framework applicable to energy regulation in Western Australia.

#### **Anomaly in Western Power's 2008 Asset Management Report**

- 4.11 The Committee has also found that an anomaly appears to exist in Western Power's 2008 Asset Management Report that was not addressed in the ERA's 2009 Notice of Compliance Failure. This relates to Western Power's 2008 "*Asset Management System Review*" audited component. According to Western Power's 2008 Asset Management Report reviewer, Western Power represented at interview that the findings of a "*Safety Case audit*" conducted by the "*Department of Energy*" (*sic*) should be relied upon by that reviewer in forming its audit opinion about the adequacy

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<sup>95</sup> ValueEdge Pty Ltd (2008) *Western Power Electricity Safety Case Gap Analysis Report*. April 2008.

<sup>96</sup> Western Power (2008) [\*Asset Management System - the ERA Assessment Report\*](#). Lloyds Register. 1 October 2008.

<sup>97</sup> Western Power (2008) [\*Electricity Distribution Licence \(EDL1\) Performance Audit Report\*](#). Ernst & Young, November 2008, p11.



of Western Power's 2008 Asset management Report.<sup>98</sup> The Committee particularly notes the following entry in the reviewer's summary of audit evidence:<sup>99</sup>

*It was noted that an external audit had been conducted by the Department of Energy [sic] as part of the Safety Case audit. The external audit findings from the Safety Case were made available and it was noted that the Asset Management System had received a Green rating with no deficiencies.*

*The Committee has also found that an anomaly appears to exist in Western Power's 2008 Asset Management Report*

- 4.12 The Committee has since learned that the Safety Case audit in question was actually conducted for Western Power by the consultancy firm ValueEdge Pty Ltd in April 2008, and UUnot for the "*Department of Energy*".<sup>100</sup> This Safety Case audit is discussed in more detail at paragraph 5.66
- 4.13 EnergySafety has since confirmed to the Committee that, in 2007, Western Power advised EnergySafety that it was developing a safety case under the *Electricity (Supply Standards and System Safety) Regulations 2001*. As part of this process, Western Power sought EnergySafety's approval to use the consultants ValueEdge, to undertake a compliance "*gap analysis*" audit. On the basis of the auditor's qualifications, EnergySafety approved the use of the auditor selected by Western Power. In August 2008, this audit was obtained in order to secure preliminary certification for Western Power's safety case. Western Power submitted its safety case documentation together with the Safety Case audit report to EnergySafety, seeking approval to implement its safety case.
- 4.14 In September 2008, EnergySafety rejected Western Power's preliminary safety case for a variety of stated reasons.<sup>101</sup> EnergySafety's rejection of the safety case, and its reasons for rejection were explicitly made known to Western Power at that time.
- 4.15 It appears that the authors of Western Power's 2008 Asset Management Report, dated 1 October 2008, may have been mistaken about the attribution and/or nature of the Safety Case audit document. Any such misconception would have been of particular significance at that time, in that it appears to have been the principal evidence on

<sup>98</sup> Western Power (2008) [\*Asset Management System - the ERA Assessment Report\*](#). Lloyds Register. 1 October 2008, at pp36 and 59-60.

<sup>99</sup> *Ibid*, p60.

<sup>100</sup> ValueEdge Pty Ltd (2008) *Western Power Electricity Safety Case Gap Analysis Report*. April 2008.

<sup>101</sup> Email message from Mr Michael Bunko, Acting Director, Electricity Compliance, EnergySafety, 17 October 2011.

which the authors proceeded to give Western Power's "Review of Asset Management System" an "Adequate" rating.<sup>102</sup> This, together with the absence of any mention of EnergySafety's 2006 Audit, raises questions about the extent of disclosure by Western Power to its 2008 Asset Management Report reviewer in May and June of 2008. It also raises related questions about the fitness for purpose of Western Power's 2008 Asset Management Report.

- 4.16 These questions, concerning the level of disclosure by Western Power to its 2008 Asset Management Report reviewer, come into sharper relief when one considers that, by late September 2008, EnergySafety had specifically notified Western Power of its rejection of the April 2008 Safety Case audit (as discussed at paragraph 5.75 below).<sup>103</sup> Western Power had time to make this fact known to its own Asset Management System reviewer, before that reviewer signed off on Western Power's 2008 Asset Management Report on 1 October 2008. In addition, after the final 2008 Asset Management Report was received by Western Power, it had an opportunity to raise:

- a. the mis-attribution of the Safety Case audit document;
- b. EnergySafety's objections to the Safety Case audit document; and
- c. the reviewers' omission of any reference to the EnergySafety 2006 Audit;

either with the reviewers directly, or by way of a covering letter to the ERA. In response to an undertaking given to the Committee at a private hearing on 14 December 2011, Western Power has since written to the ERA to correct the record.

*Western Power's failure to draw the attention of two of its independent consultant reviewers to evidence that was directly, and materially relevant ... may have resulted in more favourable audit findings than might otherwise have been the case.*

- 4.17 The Committee also notes that, according to the 2008 Western Power Licence Report, the April 2008 Safety Case audit document may have been relied upon by Western Power to justify its compliance with Energy Distribution Licence Condition 19.1 to its 2008 Licence Report reviewer.<sup>104</sup> The 2008 Western Power Licence Report also notes

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<sup>102</sup> Western Power (2008) [\*Asset Management System - the ERA Assessment Report\*](#). Lloyds Register. 1 October 2008, at pp36 and 59-60.

<sup>103</sup> Email message from Mr Michael Bunko, Acting Director, Electricity Compliance, EnergySafety, 17 October 2011.

<sup>104</sup> Western Power (2008) [\*Electricity Distribution Licence \(EDL1\) Performance Audit Report\*](#). Ernst & Young, November 2008, at "[\*Appendix A Audit Program, Risk Assessment and Detail\*](#)", p23. Note the reference to the "gap analysis".

that the reviewer, in this instance, had “*obtained confirmation from the ERA that they have approved Western Power’s asset management system.*”<sup>105</sup> On the basis of information referred to in its 2008 Western Power Licence Report, the reviewers rated Western Power’s “*Asset Management System*” as “*Compliant with no further action required to maintain compliance*”.<sup>106</sup> Prior to the reviewer signing off on its 2008 Western Power Licence Report on 5 November 2008, it had the opportunity to raise:

- a. the mis-attribution of the Safety Case audit document;
- b. EnergySafety’s objections to the Safety Case audit document; and,
- c. the reviewers’ omission of any reference to the EnergySafety 2006 Audit;

either with the reviewers directly, or by way of a covering letter to ERA. Western Power did not take the opportunity so provided, to ensure that full and adequate disclosure was made to its principal regulator. In response to an undertaking given to the Committee at a private hearing on 14 December 2011, Western Power has since written to the ERA to correct the record.

*In response to an undertaking given to the Committee at a private hearing on 14 December 2011, Western Power has since written to the ERA to correct the record.*

- 4.18 Western Power’s failure to draw the attention of two of its independent consultant reviewers to evidence that was directly, and materially relevant to those licensing requirements that each consultant had been engaged to audit, may have resulted in more favourable audit findings than might otherwise have been the case. This issue is addressed in further detail at paragraphs 5.66 to 5.93 below. In addition, given that the ERA itself appears not to have identified this flaw in the audit findings of either of Western Power’s consultant reviewers, it was not subsequently included in the detail of ERA’s 2009 Notice of Compliance Failure served on Western Power on 8 January 2009. This means that the ERA’s 2009 Notice of Compliance Failure, served on Western Power, may not have been as comprehensive as it should have been.

<sup>105</sup> *Ibid*, p23.

<sup>106</sup> *Ibid*, pp11 and 25.

## 5 ENERGYSAFETY'S 2008 AUDIT OF WESTERN POWER

5.1 In May 2009, EnergySafety published the findings of a follow-up audit of Western Power's wooden power pole asset management systems (the 2008 Audit).<sup>107</sup> The review on which this publication was based, occurred prior to August 2008. Among other things, this review examined progress made by Western Power since the publication of the 2006 Audit.

5.2 This section of the Report discusses the following aspects of the 2008 Audit:

- Wooden power pole line and reinforcement findings;
- Wooden power pole failure rates;
- Wooden power pole inspections; and,
- Unassisted wooden power pole failures in the rural network.

*... the proprietary "Poles 'n' Wires" software that Western Power purchased in 2006 for its line and structure design, was obtained based on inadequate technical assessment and testing.*

### Wooden Power Pole Line and Reinforcement Findings

5.3 Western Power's corporate design specification documentation relating to distribution asset construction and maintenance was reviewed as part of EnergySafety's 2008 Audit. EnergySafety found that: *"Keeping the detail in these volumes current and consistent with each of the other volumes and the source documents is a formidable task, which Western Power is not managing."*<sup>108</sup> In addition, EnergySafety found that the proprietary "Poles 'n' Wires" software that Western Power purchased in 2006 for its line and structure design, was obtained based on inadequate technical assessment and testing. As a result, the 2008 Audit highlighted significant operational problems with this software, including the fact that it was applying an outdated version of the relevant technical standards.<sup>109</sup>

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<sup>107</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009.

<sup>108</sup> *Ibid*, p15.

<sup>109</sup> *Ibid*, p18. See also, Western Power (2008) [Asset Management System - the ERA Assessment Report](#). Lloyds Register. 1 October 2008, p46; and, Economic Regulation Authority (2009) [Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power](#). Government of Western Australia. 4 December 2009, p199.

- 5.4 These findings can also be compared with the ERA's observations in late 2009 in another context:<sup>110</sup>

*The Authority's view is that the planning, design and governance processes of Western Power were, during the first access arrangement period, sufficiently deficient that the value of new facilities investment is in excess of the amount that satisfies the efficiency test of section 6.52(a). On the basis of available information, it has not been possible for the Authority to rigorously derive a value of this inefficiency ...*

Western Power still "had not established an effective stay inspection and repair/replace program" as at May 2009.

- 5.5 In the 2008 Audit document, EnergySafety did find, however, that Western Power was working to identify the operational problems that had been identified in the 2006 Audit, and implement the necessary remedial action.<sup>111</sup>
- 5.6 The 2008 Audit examined Western Power's processes surrounding wooden power pole stay design and installation. The 2008 Audit indicated that:<sup>112</sup>

*Western Power's procurement personnel involved in purchasing the stay wire and the other stay materials used in Western Power's distribution network have no Western Power approved specifications for these materials. In the absence of these specifications they cannot and do not make any inspections to ensure that the materials supplied meet Western Power's strength and other performance requirements.*

- 5.7 At this time, Western Power had advised EnergySafety that they were in the process of developing appropriate specifications for these processes.<sup>113</sup>
- 5.8 The 2008 Audit also found that Western Power still "had not established an effective stay inspection and repair/replace program" as at May 2009.<sup>114</sup> This was despite the issue having been raised in the earlier, 2006 Audit.

<sup>110</sup> Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009, p200.

<sup>111</sup> Department of Commerce, EnergySafety, [\*2008 Distribution Wood Pole Audit Review\*](#), May 2009, p17.

<sup>112</sup> *Ibid*, p23.

<sup>113</sup> *Id*.

<sup>114</sup> *Ibid*, p35.

- 5.9 Equally concerning to this Committee, was EnergySafety's finding in its 2008 Audit that:<sup>115</sup>

*The 2008 Audit Review found that some 310,000 wood poles in Western Power's distribution system have been reinforced with a variety of pole base reinforcement systems. None of these have been shown by calculation or trial to have the strength necessary for them to be safe.*

*While not in large numbers, these continuing failures of reinforced poles present a real safety risk in the distribution network that should be assessed and managed.*

*The 2008 Audit Review found that some 310,000 wood poles in Western Power's distribution system have been reinforced with a variety of pole base reinforcement systems. None of these have been shown by calculation or trial to have the strength necessary for them to be safe.*

- 5.10 The 2008 Audit indicated that, as at May 2009, Western Power's wooden power pole reinforcement program had recently been contracted to Utilities Asset Management (UAM) following the 2006 Audit. EnergySafety observed that:<sup>116</sup>

*The 2008 Audit Review has found reassuring evidence that the UAM pole reinstatement system Western Power now employs is well engineered. Western Power's pole base reinforcement will, subject to the findings of its audit of the UAM systems installed to date, deliver pole base reinforcement with factors of safety of two (x2) or more with the lines and poles subjected to the wind and other loads specified in HB C(b)1-1999.*

- 5.11 Notwithstanding this positive contracting-out measure by Western Power, the 2008 Audit noted that concerns raised in the previous 2006 Audit, relating to the serviceability criteria applied by Western Power to wooden power pole stay and reinforcement measures, were still outstanding.<sup>117</sup> In addition:<sup>118</sup>

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<sup>115</sup> *Ibid*, p65.

<sup>116</sup> *Ibid*, p42.

<sup>117</sup> *Ibid*, p36.

<sup>118</sup> *Ibid*, p42.

*The 2008 Audit Review also found that responsible persons from Western Power's Asset Management and Service Delivery branches were not included in the contract development, request for tender, tender assessment or negotiations with the successful bidder. This deprived the contract process of their experience and skills, and them of critical knowledge of the contract they are to manage.*

- 5.12 In addition, the Committee notes the following observation, made by the ERA in late December 2009, relating to Western Power's asset maintenance program:<sup>119</sup>

*... Western Power indicates that some maintenance works have been less than necessary for compliance with policies for asset management resulting in a backlog of maintenance work.*

*"... Western Power remains accountable for operation of the network, including meeting licence conditions service standard benchmarks and requirements for health and safety."*

- 5.13 In arguing its case with the ERA for a proposed expansion of non-capital expenditure in this instance, the ERA noted that Western Power's submission made particular reference to "*more onerous safety, health and environmental regulations*". After further inquiry of Western Power, the ERA noted that:<sup>120</sup>

*... Western Power indicates that increases in expenditures are not driven by new regulatory requirements, but rather compliance with existing regulatory requirements.*

- 5.14 In response to this additional information the ERA observed:<sup>121</sup>

*The Authority notes that, regardless of the forecast of non-capital costs taken into account in the approval of the proposed access arrangement revisions, the allocation of available funds across activities and priorities in operation and maintenance of the SWIN is a matter for determination by Western Power. Regardless of the Authority's decision on the forecast of non-capital costs, Western Power remains accountable for operation of the network, including*

<sup>119</sup> Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009, p 43.

<sup>120</sup> *Ibid*, p151.

<sup>121</sup> *Id.*

*meeting licence conditions service standard benchmarks and requirements for health and safety.*

- 5.15 The Committee particularly notes the following extract from the ERA's AA2 decision with respect to the business case underlying Western Power's proposed 73% increase in preventative condition maintenance costs from the 2009/10 to the 2010/11 financial years:<sup>122</sup>

*In view of the lack of justifying information for the substantial increases in forecast costs over the second access arrangement period, the Authority determined in the Draft Decision that the anticipated revised forecasts were not consistent with the requirements of section 6.40 of the Access Code. The Authority indicated an expectation that Western Power would provide further information to support the anticipated revised forecasts, following the issuing of the Draft Decision. Pending any such information being received, and for the purposes of the Draft Decision, the Authority determined that the year-to-year increases in forecast preventative maintenance costs should be limited to 15 per cent.*

*The asset management system shortcomings that were identified in the 2006 Audit ... appear to have hampered Western Power's ability to mount a persuasive business case, for the increased expenditure, with the ERA.*

- 5.16 The asset management system shortcomings that were identified in the 2006 Audit by EnergySafety, and which still appeared to be in existence May 2009 at the publication of the 2008 Audit, appear to have hampered Western Power's ability to mount a persuasive business case, for the increased expenditure, with the ERA. These matters should be weighed against the fact that Western Power's Asset Management System reviewer was advised by Western Power in 2008 that:<sup>123</sup>

*Relationship plans are in place to ensure that both asset replacement and reliability issues are considered when undertaking reinforcement works.*

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<sup>122</sup> *Ibid*, p156.

<sup>123</sup> Western Power (2008) [\*Asset Management System - the ERA Assessment Report\*](#). Lloyds Register. 1 October 2008, at p45.



## Wooden Power Pole Failure Rates

- 5.17 In its 2008 Audit, EnergySafety reported that Western Power had achieved a measurable reduction in the number of unassisted wooden power pole failures. However, according to the 2008 Audit, this was principally due to corrections recently made by Western Power to its wooden power pole asset records. As the 2008 Audit observed:<sup>124</sup>

*The unassisted pole failure data have been ‘cleansed’ during 2007 to eliminate pole failures from other causes. These were inflating the reported figures. This data cleansing has not been extended to include all the data reported in Board Reports, thus diminishing confidence in the trends reported.*

*This data cleansing has not been extended to include all the data reported in Board Reports, thus diminishing confidence in the trends reported.*

- 5.18 Nevertheless, the 2008 Audit report did observe that Western Power was giving its wooden power pole asset management responsibilities a greater level of operational priority.<sup>125</sup>

*Unassisted pole failures have decreased from over 350 in 1999-2000 to 134 in 2007-08. While this improvement in part reflects correcting data errors during the last 12 months, some will also be the consequence of increased attention to wood pole management. While the reduction in unassisted pole failures is encouraging, the results are still poor compared with leading Australian practice.*

- 5.19 As with the prior 2006 Audit, the 2008 Audit indicated the close relationship between wooden power pole condemnation rates (together with the adequacy of the wooden power pole asset management system) with unassisted wooden power pole failure rates.

## Pole Condemnation Rates

- 5.20 The 2008 Audit contained a number of observations relating to Western Power’s wooden power pole condemnation rates. These comments indicated that wooden power pole condemnation rates appeared to vary widely from year to year, but that insufficient analysis had been undertaken by Western Power into the causes for this

<sup>124</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p57.

<sup>125</sup> *Ibid*, p8.

wide variation.<sup>126</sup> The 2008 Audit also noted that Western Power's reported wooden power pole replacement rates were essentially equivalent to its wooden power pole condemnation rates.<sup>127</sup> This point was repeated in a May 2009 report prepared by an ERA appointed reviewer (the **May 2009 ERA report**).<sup>128</sup>

- 5.21 EnergySafety, in its 2008 Audit, expressed renewed concern about the adequacy of the wooden power pole inspection systems, processes and practices. These concerns are highlighted in later paragraphs of this Report commencing at paragraph 5.101. However, the Committee notes that, if EnergySafety's concerns in this regard were warranted, it would raise significant questions about the adequacy of Western Power's wooden power pole condemnation rates at this time.

#### *Pole Replacement Rates*

*Balancing economic life against reliability and safety risks requires data Western Power does not have but should collect.*

- 5.22 The 2006 Audit report was released at the conclusion of an investigation by EnergySafety that had commenced in 2005. The 2008 Audit was published in mid-2009. Effectively, four years passed from the commencement of EnergySafety's first investigation of Western Power's wooden power pole asset management systems to the release of the 2008 Audit. In addition, almost 15 years had passed since Western Power's own commissioned report had found, in 1994, that its inspection technique would only identify "*~17% of the unserviceable poles examined.*" (See paragraph 3.43 above). The Committee notes that, despite EnergySafety's highly critical findings regarding Western Power's wooden power pole asset management systems in 2006, in its 2008 Audit, EnergySafety was able to find, in connection with the wooden power pole asset base, that:<sup>129</sup>

*Balancing economic life against reliability and safety risks requires data Western Power does not have but should collect.*

- 5.23 EnergySafety, in its 2008 Audit, observed that:<sup>130</sup>

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<sup>126</sup> *Ibid*, p33.

<sup>127</sup> *Ibid*, p48.

<sup>128</sup> Wilson Cook, [Review of Western Power's Expenditures for Second Access Arrangement](#). May 2009, p55.

<sup>129</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p47.

<sup>130</sup> *Ibid*, p44.

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*Pole inspection is a necessary part of any prudent network operation, but is not sufficient on its own to ensure the safety of the wood pole networks. An effective and well founded pole replacement plan is necessary to achieve the safety required.*

- 5.24 On the question of Western Power’s wooden power pole replacement practices, the 2008 Audit stated that:<sup>131</sup>

*The specification used to procure wood poles was issued in 1996 and has been used, without review or editing, continuously from that time as the basis of the draw-off orders against a preferred vendor agreement for the supply of poles. The specification does not recognise organisational and other changes and no longer guarantees the delivery of poles that are fit for purpose.*

*... the 2008 Audit also found that the same standards-based methodologies were not applied to; “pole replacement work arising from the pole inspection activity, and the repair work”.*

- 5.25 The 2008 Audit did indicate that Western Power’s Delivery Design team provided a sound, standards-based design service. However, the 2008 Audit also found that the same standards-based methodologies were not applied to; “*pole replacement work arising from the pole inspection activity, and the repair work.*”<sup>132</sup> The 2008 Audit proceeded to state that:<sup>133</sup>

*The structures used [in pole replacement and repair work] are generally the current structures used within Western Power. The existing structures may not have been designed to the standards and guidelines current when they were erected, and the new structures may not have the strength to comply with Western Power’s latest standards, which assume the lines and structures are subjected to the wind and other loads specified in the current editions of C(b)1.*

- 5.26 In addition, EnergySafety’s 2008 Audit indicated that:<sup>134</sup>

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<sup>131</sup> *Ibid*, p18.

<sup>132</sup> *Ibid*, p19.

<sup>133</sup> *Id.*

<sup>134</sup> *Ibid*, p14.

*As in 2006, the 2008 Audit Review did not find design records demonstrating that the distribution wood pole power lines and structures in Western Power's networks complied with relevant technical standards, codes and guidelines when they were erected. Western Power acknowledges that these design records do not exist.*

- 5.27 The 2008 Audit further indicated that available wooden power pole asset data lacked certainty in a number of key respects. The Committee notes the following relevant observation from the 2008 Audit:<sup>135</sup>

*Reported pole replacement rates also vary and Western Power's staff identified difficulties with the fieldwork activity classifications which mask the real pole replacement rates. For example, a new pole installed in a different hole to that occupied by the pole being replaced is not reported as a pole replacement.*

- 5.28 Deficiencies in the data contained within asset management systems relating to Western Power's wooden power pole asset base were highlighted by EnergySafety in the 2008 Audit, as it had previously been identified in the 2006 Audit. In the absence of meaningful data about the condition of the distribution network wooden power poles, the 2008 Audit urged:<sup>136</sup>

*In the short run, while the necessary data are gathered and analysed, the prudent path is to use the best information available and err on the side of caution.*

- 5.29 Even at the time of writing this Report, the Committee is struck by the forceful logic of the assessment by EnergySafety in this regard in 2009.

*In the short run, while the necessary data are gathered and analysed, the prudent path is to use the best information available and err on the side of caution.*

- 5.30 After reviewing Western Power's wooden power pole replacement processes, EnergySafety in the 2008 Audit expressed the view that:<sup>137</sup>

*As with most other elements, no service agreements were identified between the asset managers and the service providers for this activity, nor was there any periodic review or audit of the activity to test for*

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<sup>135</sup> Ibid, p57.

<sup>136</sup> Ibid, p47.

<sup>137</sup> Ibid, p53.

*compliance with the required standards and business objectives. No management system was discovered that would ensure unserviceable poles were replaced in a timely manner. Although the pole replacement rates are now higher than those reported in the 2006 Audit, they are not sufficient to replace the highest risk poles at an acceptable rate and deliver acceptable wood pole safety.*

- 5.31 In addition, the 2008 Audit found that internal Western Power information systems did not provide assurance that those wooden power poles which were identified in the inspection process as being unserviceable, were being replaced.<sup>138</sup>

*A list of the unserviceable poles is not regularly reviewed to identify the poles that have not been remedied. The concept of timely replacement based on the risk (probability and consequence) of the pole failure was not part of the pole replacement management.*

- 5.32 One aspect of the wooden power pole replacement process that was not addressed during the 2006 Audit, was the wooden power pole procurement process. This process was considered during the 2008 Audit. According to EnergySafety:<sup>139</sup>

*... Western Power makes no assessment of the poles supplied for technical compliance with the [contract] specification, either at the point of purchase or at any point in the supply process. This does not arise because the parties in the pole supply are unwilling to provide the access and information needed. Batch records of the pole treatment process are retained by Koppers and are available to Western Power. But Western Power has no system in place for audits of the treatment process, or examination of the batch records, to establish that the poles delivered comply with the specification and current pole treatment standards.*

*Although the pole replacement rates are now higher than those reported in the 2006 Audit, they are not sufficient to replace the highest risk poles at an acceptable rate and deliver acceptable wood pole safety.*

- 5.33 The 2008 Audit indicated that Western Power had undertaken to address the relevant process flaws in a revised specification.<sup>140</sup> In addition, EnergySafety found that

<sup>138</sup> *Ibid*, p44.

<sup>139</sup> *Ibid*, p21.

<sup>140</sup> *Id*.

Western Power secured some of its wooden power poles from sources that did not provide the same quality assurance processes as the wooden power poles sourced from Koppers.

- 5.34 The 2008 Audit indicated that EnergySafety had been assured that Western Power's existing suppliers of wooden power poles could source up to 20,000 wooden power poles per annum if required.<sup>141</sup> However, before embarking on such an expanded program of wooden power pole replacements, there remained:<sup>142</sup>

*... unanswered questions about adequate skilled labour and finance. Also unanswered is how Western Power will select the additional poles to be replaced over and above the condemned poles identified by its (improved) pole inspection practice.*

- 5.35 The Committee notes that, as for the 2006 Audit, EnergySafety's 2008 Audit report again highlighted concerning deficiencies in the wooden power pole management systems, processes and practices within Western Power as they related to its wooden power pole replacement program. The Committee further notes that the 2008 Audit highlighted that Western Power, in its AA2 submission to the ERA, had only requested funding for a total of 22,500 distribution wooden power pole replacements over the three years from 2009/10 to 2011/12, or an average of 7,500 per annum.<sup>143</sup> The Committee notes that this average replacement rate for the three year period was around half of the lower end of the range of "credible" wooden power pole replacements (13,800-25,000) that EnergySafety had proposed in its 2006 Audit report of 13,800.<sup>144</sup>

*... this average replacement rate for the three year period was around half of the lower end of the range of "credible" wooden power pole replacements*

#### *Wooden Power Pole Asset Management Systems*

- 5.36 An important finding of EnergySafety in its 2006 Audit was that Western Power had accrued a significant wooden power pole replacement backlog as a result of various factors. Given that the relevant industry standards specifically refer to wooden power

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<sup>141</sup> *Ibid*, p22.

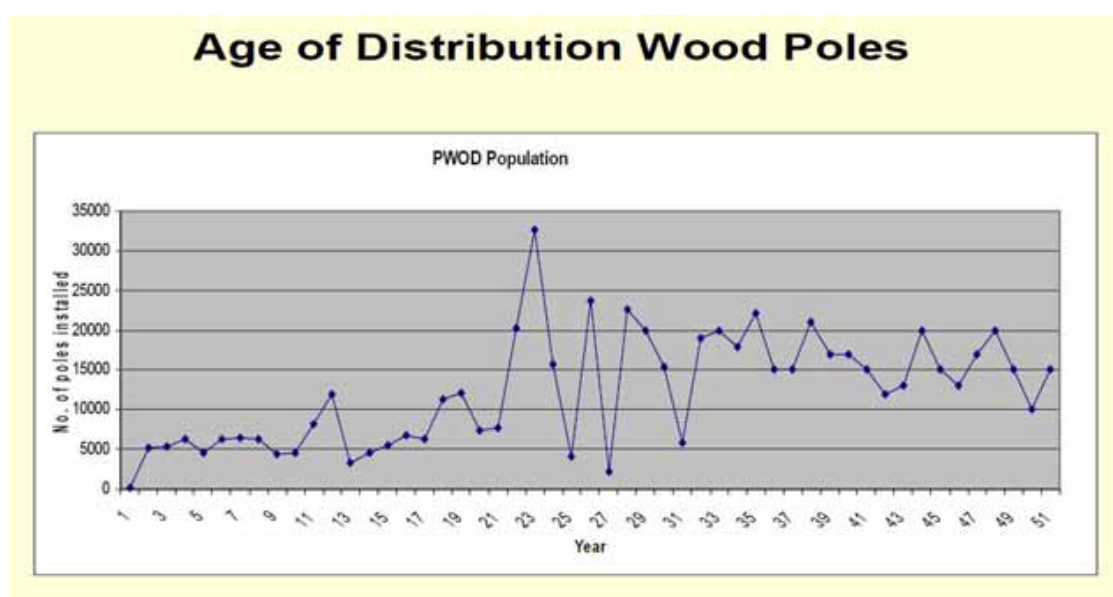
<sup>142</sup> *Ibid*, p47.

<sup>143</sup> *Ibid*, p48.

<sup>144</sup> Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p4.

pole age as one of the key variables in wooden power pole reinforcement and replacement decision making, addressing this backlog would appear to have been reliant, to a significant degree, on accurate wooden power pole installation data. Indeed, information about the precise age and location of the oldest wooden power poles in Western Power's asset base would therefore appear to have been a considerable asset management concern for Western Power.

- 5.37 EnergySafety's 2008 Audit reported Western Power's own data relating to the age distribution of the wooden power poles in the South West Interconnected Network (SWIN), by means of the following chart, taken from an internal Western Power operational presentation:<sup>145</sup>



*"Prudent practice would have reinforced all these poles at the ground line at 25 years and systematically replaced them at 40 years, starting with the oldest poles first."*

- 5.38 The Committee notes from the above chart that, as at May 2009, around a third of the wooden power pole asset base of Western Power appeared to be in excess of 28 years in age. The Committee also notes that, on the basis of its investigation, EnergySafety concluded in 2009 that; *"All the poles older than about 28 years are untreated jarrah*

<sup>145</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p45.

with service lives of 15-25 years un-reinforced and 40 years reinforced.”<sup>146</sup> The findings were expanded upon in the following extract, taken from the 2008 Audit:<sup>147</sup>

*Australian Standard AS 2209 gives a service life for untreated jarrah poles in ground as 15 to 25 years and above ground 40 years. Almost half the poles in Western Power’s distribution network are untreated jarrah installed from the early 1950’s to the late 1970’s. The oldest of these are almost 60 years old and the youngest almost 30 years old. Prudent practice would have reinforced all these poles at the ground line at 25 years and systematically replaced them at 40 years, starting with the oldest poles first. None of this is evident in Western Power’s SWIS Distribution Asset Management Plan 2008/09-2017/18.*

- 5.39 One inference that EnergySafety identified based on its 2008 Audit, was that Western Power should have focused its wooden power pole replacement and reinforcement program on the right hand portion of the above chart, namely; those untreated Jarrah wooden power poles that had been in place for more than 28 years (see paragraphs 3.54 above, and 5.121 below). The 2008 Audit suggested prudent practice might require that a program of replacement and reinforcement should commence with the oldest untreated jarrah wooden power poles, and work to progressively replace this component of the wooden power pole asset base in line with industry standards. It is of some concern, therefore, that EnergySafety reported in its 2008 Audit that; “[t]his focus is not evident in Western Power’s SWIS Distribution Asset Management Plan 2008/09-2017/18.”<sup>148</sup>

“[t]his focus is not evident in Western Power’s  
SWIS Distribution Asset Management Plan ...”

- 5.40 Any focussed wooden power pole replacement program by Western Power directed towards its untreated jarrah wooden power pole assets using the age of those wooden power poles as a material deliberative factor, would require detailed information about the location of Western Power’s oldest untreated jarrah wooden power poles. Western Power’s “Distribution Asset Management Plan for 2009/10” contains the following chronological chart indicating the installation dates for distribution wooden power poles, based on data generated by Western Power’s DFMS (see also paragraph 7.7 below):<sup>149</sup>

<sup>146</sup> *Id.* Service life estimate quoted is taken from Australian Standard AS 2209 - 1994, *Timber Poles for Overhead Lines*.

<sup>147</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p46.

<sup>148</sup> *Ibid.*, p47.

<sup>149</sup> Western Power (2009) *Distribution Asset Management Plan for 2009/10*. (DM#3273896) 1 October 2009, p31.



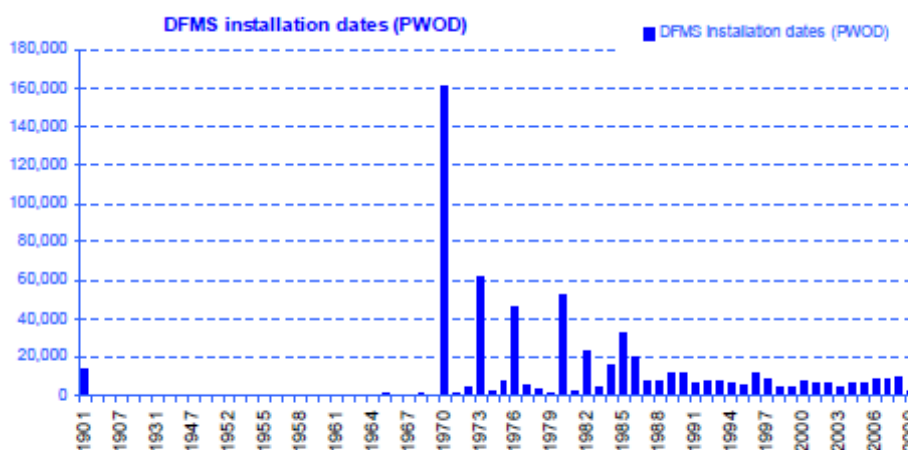


Figure 9: Present PWOD population based on the DFMS

- 5.41 The above chart suggests that the DFMS may not be able to provide accurate information regarding the location and age of approximately 160,000 of Western Power's individual untreated jarrah wooden power poles.
- 5.42 The Committee notes that the most concerning aspect of the above chart, is the spike in installations of wooden power poles for 1970, together with the nugatory installation data prior to this year. This suggests that the 1970 figure is little more than an inventory of wooden power poles in the system at that date.<sup>150</sup> The Committee notes that the high-points in the subsequent years of the 1970s appears to reflect periodic transfers of wooden power pole assets from individual Shire Councils to the then SEC.<sup>151</sup> It appears likely then, that the smaller spikes for the installation of wooden power poles throughout the 1970s also represent inventory transfers, rather than actual installation dates. The remainder of the graph suggests that it is unlikely that SWIN wooden power pole installations occurred at rates exceeding 10,000-15,000 per year for the first 80 years of the last century.

*... the 1970 figure is little more than an inventory of wooden power poles in the system at that date.*

<sup>150</sup> Western Power (2008) [Asset Management System - the ERA Assessment Report](#). Lloyds Register. 1 October 2008, at p54.

<sup>151</sup> Western Power (2009) *Distribution Asset Management Plan for 2009/10*. (DM#3273896) 1 October 2009, p30.

- 5.43 The Committee notes the following observation taken from Western Power's "Distribution Asset Management Plan for 2009/10":<sup>152</sup>

*According to DFMS data 161,000 wood poles installed in 1970 and about 14,000 installed in 1901 are still in the Western Power network. Figure 10 [not shown] shows that there are inconsistencies in Western Power's information records. These types of inconsistencies and peaks in Western Power's information system make it difficult to analyse and hence, to formulate an asset management strategy.*

- 5.44 Notwithstanding this difficulty identified in an internal asset management document in late 2009 - and not subsequently contested by Western Power - the corporation was able to state with assurance in September 2011 that:<sup>153</sup>

*For distribution network assets, Western Power was an early adopter of integrating GIS (geographic information systems) into asset registration and management. An integrated dataset of distribution assets has been consolidated and maintained for over 20 years.*

- 5.45 The Committee notes that this statement was not qualified by reference to the fact that the dataset to which it refers, appears on Western Power's own assessment to be inherently flawed.

*"These types of inconsistencies and peaks in Western Power's information system make it difficult to analyse and hence, to formulate an asset management strategy."*

- 5.46 In its 2008/09 Annual Report, Western Power disclosed that its; "Substation plant, overhead lines and cables", were depreciated on a 50-year basis for the purpose of its financial statements.<sup>154</sup> The Committee also notes that the May 2009 ERA report appears to have addressed the issue of Western Power's wooden power pole asset replacement in a manner that may not be entirely consistent with either an economic, or standards-based, assessment of the serviceability of Western Power's wooden power pole asset base. The May 2009 ERA report stated that Western Power's own estimate of the average remaining life of its entire distribution wooden pole asset base

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<sup>152</sup> *Id.*

<sup>153</sup> Western Power (2011) [\*Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. \(Appendix L: Network Management Plan: September 2011\)\*](#) 30 September 2011, p4-18.

<sup>154</sup> Western Power, [\*Annual Report 2008/09\*](#), August 2009, p80.

was 19 years.<sup>155</sup> The May 2009 ERA report, at “6.4 Replacement Expenditure” states that:<sup>156</sup>

*We also noted that in cases where Western Power considers the risks of failure to be manageable, a number of asset classes are managed through replacement on failure consistent with normal industry practice.*

- 5.47 The May 2009 ERA report thereafter proceeded to consider how wooden power pole replacement rates, condemnation rates and failure rates may be relevant to the economic regulation of Western Power. The Committee particularly notes following passage from the May 2009 ERA report:<sup>157</sup>

*Western Power advised us that its forecast pole replacement expenditure is based on condition surveys, will replace around 1.2% of the pole population p.a., will address its list of condemned poles at a rate more or less equal to the rate at which they are presently being detected and will reduce the present pole failure rate from 34 per 100,000 poles p.a. to 10 or less over the next period. It recognises that its present pole failure rate is higher than the national average and the proposed programme is clearly a measure addressing that matter.*

*“... forecast pole replacement expenditure ... will address its list of condemned poles at a rate more or less equal to the rate at which they are presently being detected ...”*

- 5.48 Western Power’s estimate of an average remaining economic life of 19 years for its distribution wooden power pole asset base is recorded at page 15 of the May 2009

<sup>155</sup> Wilson Cook, [Review of Western Power’s Expenditures for Second Access Arrangement](#), May 2009, p15. Compare with the 14.5-year average remaining asset life disclosed by Western Power to the Economic Regulation Authority in July 2009: Economic Regulation Authority (2009) [Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power](#). Government of Western Australia. 4 December 2009. *Appendix A: Target Revenue Calculation (Revenue Model)*, p4 of 97.

<sup>156</sup> Wilson Cook, [Review of Western Power’s Expenditures for Second Access Arrangement](#), May 2009, p55.

<sup>157</sup> *Id.*

ERA report.<sup>158</sup> Western Power also reported a wooden power pole asset replacement rate of 1.2%, (indicating that each pole is to be replaced after 83 years of service) at page 55 of the same report. The Committee has difficulty reconciling these two related figures. Further, Western Power expressed the view that an average standard service life for its distribution wooden power pole assets is 41 years,<sup>159</sup> with a standard service life for its transmission wooden power pole assets of 45 years.<sup>160</sup>

- 5.49 Notwithstanding this apparent lack of fit between age profiles, replacement rates and standard service lives, the May 2009 ERA report found that:<sup>161</sup>

*Based on the fact that its expenditure is projected to address the rate at which poles are currently being condemned, we consider its projected level of pole replacement expenditure to be reasonable.*

- 5.50 Later in the same May 2009 the ERA report, a review of Western Power's capital expenditure forecasts for the years 2007-2012 revealed that Western Power anticipated declaring wooden power pole distribution assets as becoming economically redundant at annual rates beginning at 0.54% per annum and tapering down to 0.28% per annum over the six-year period in question.<sup>162</sup>

*"Either the pole population is in better condition than indicated by our analysis ... or the inspections are flawed ..."*

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<sup>158</sup> This should be compared to the 14.5-year average remaining asset life (see footnote 155), and Western Power's estimate of the average economic life of its transmission wooden power pole asset base of 20.9 years: Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009. *Appendix A: Target Revenue Calculation (Revenue Model)*, p34 of 97. The Wilson Cook, [\*Review of Western Power's Expenditures for Second Access Arrangement\*](#). May 2009, p15, indicates that Western Power's estimated average remaining life of its transmission poles/towers is 30 years.

<sup>159</sup> Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009. *Appendix A: Target Revenue Calculation (Revenue Model)*, p4 of 97. See also Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009, p222.

<sup>160</sup> Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009. *Appendix A: Target Revenue Calculation (Revenue Model)*, p34 of 97.

<sup>161</sup> Wilson Cook, [\*Review of Western Power's Expenditures for Second Access Arrangement\*](#). May 2009, p55.

<sup>162</sup> Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009. *Appendix A: Target Revenue Calculation (Revenue Model)*, p11 of 97. Percentages represent projected wooden power pole redundancies expressed as a proportion of the years' average wooden power pole asset value.

- 5.51 These redundancy projections were subject to critique in a subsequent review of Western Power's expenditure governance conducted on behalf of the ERA, published only two months later. That review, in July 2009 (the **July 2009 ERA report**), made the following observation:<sup>163</sup>

*Western Power stated that it used recent pole condemnation rates to determine the number of poles that it assumes will require replacement during the AA2 period. It therefore appears that current pole condemnation rates are lower than they should be, given that they are lower than our analysis of the age profile and the assumed asset life. Either the pole population is in better condition than indicated by our analysis (indicating an incorrect age profile or a pessimistic assumption of average life), or the inspections are flawed and poles that should be identified for replacement are being assessed as being in satisfactory condition. ...*

*... we note that the inspections as currently undertaken do not involve digging to inspect the condition of the pole below ground level, and that as a result pole deterioration below ground level may not be detected. This is one possible reason why current condemnation rates are lower than expected.*

*More information is required before firm conclusions can be reached. However, it is reasonable to conclude that the failure of wooden poles remains a serious safety and reliability issue and that improvement is unlikely unless the rate of wood pole replacement is increased.*

*"... it is reasonable to conclude that the failure of wooden poles remains a serious safety and reliability issue and that improvement is unlikely unless the rate of wood pole replacement is increased ..."*

- 5.52 The following table, produced by the Committee, compares each of the rates of non-serviceability that are surveyed above in connection with the Distribution network:

<sup>163</sup> Western Power (2009) [Review of Expenditure Governance - Western Power](#). Geoff Brown & Associates Ltd. 14 July 2009, p38.

	Distribution Network			
	2006		2008	
	Rate	Years	Rate	Years
Depreciation	2% - 2.50%	40-50 <sup>164</sup>	2%	50 <sup>165</sup>
Maximum Average Economic Life	2.40%	41 <sup>166</sup>	2.40%	41
Average Economic Life Remaining				14.5 or 19 <sup>167</sup>
Standards-Based Serviceable Life	2% - 4%	25 - 50	2% - 4%	25 - 50
Replacement Rate	0.24%	414	1.20% <sup>168</sup>	83
Redundancy Rate	0.54% <sup>169</sup>	185	0.44% <sup>170</sup>	154

- 5.53 What is apparent to the Committee from the above table is its lack of coherence in certain key aspects. The Committee is uncertain why there should be any a lack of coherence regarding a fundamental component of prudent commercial practice such as the management of essential non-current assets. Of particular interest to the Committee is the extent to which Western Power's depreciation treatment of the wooden power pole asset base reported in its Annual Reports has been consistent with EnergySafety's asserted standards-based serviceable life at a maximum of 50 years (or between 2% and 4% per annum).

*The Committee is uncertain why there should be any a lack of coherence regarding a fundamental component of prudent commercial practice such as the management of essential non-current assets.*

<sup>164</sup> Western Power, [Annual Report 2006/07](#), August 2007, p76.

<sup>165</sup> Western Power, [Annual Report 2008/09](#), August 2009, p80.

<sup>166</sup> Economic Regulation Authority (2009) [Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power](#). Government of Western Australia. 4 December 2009. *Appendix A: Target Revenue Calculation (Revenue Model)*, p4 of 97.

<sup>167</sup> *Ibid*, p4 of 97 (14.5 years). See also Economic Regulation Authority (2009) [Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power](#). Government of Western Australia. 4 December 2009, p222. Wilson Cook, [Review of Western Power's Expenditures for Second Access Arrangement](#). May 2009, p15 (19 years).

<sup>168</sup> Wilson Cook, [Review of Western Power's Expenditures for Second Access Arrangement](#). May 2009, p55.

<sup>169</sup> Economic Regulation Authority (2009) [Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power](#). Government of Western Australia. 4 December 2009. *Appendix A: Target Revenue Calculation (Revenue Model)*, p11 of 97. Calculated by means of the carrying value of redundant distribution wooden power pole lines, expressed as a percentage of the average 2007 value of distribution wooden power pole lines: *Ibid*, p5 of 97.

<sup>170</sup> *Ibid*, p11 of 97. Calculated by means of the carrying value of redundant distribution wooden power pole lines, expressed as a percentage of the average 2009 carrying value of distribution wooden power pole lines: *Ibid*, p5 of 97.

- 5.54 It remains unclear to this Committee why, in the absence of compelling contrary hard data about the serviceability of its wooden power pole asset base, ordinary prudent commercial practice would not require Western Power to have adopted a wooden power pole replacement strategy at roughly the same 2% to 4% for each year since its inception in 2006. The Committee is also unclear why the May 2009 ERA report did not draw the same inference. By contrast, the July 2009 ERA report observed that:<sup>171</sup>

*More information is required before firm conclusions can be reached. However, it is reasonable to conclude that the failure of wooden poles remains a serious safety and reliability issue and that improvement is unlikely unless the rate of wood pole replacement is increased.*

- 5.55 The Committee again notes the extent to which these findings by the authors of the July 2009 ERA report are consistent with the repeated findings of EnergySafety with respect to “credible” wooden power pole replacement rates.

*“In every case the asset management elements are developed and delivered by different groups in different parts of the organisation.”*

- 5.56 In addition to the information system inconsistencies, and process flaws that were highlighted in the 2006 Audit, and largely confirmed by the July 2009 ERA report, the Committee notes the observation in EnergySafety’s 2008 Audit that Western Power’s wooden power pole asset management system did not appear to be subject to any overarching coordination within Western Power. As the 2008 Audit observed:<sup>172</sup>

*In every case the asset management elements are developed and delivered by different groups in different parts of the organisation. The lead asset management role is divided between the Standards, Policy and Data Quality and Network Performance Branches within the Customer Services Division. The design, construction, inspection, pole base reinforcement and replacement service was delivered by one or more branches within the Service Delivery Division, or contractors managed by Service Delivery.*

*The 2008 Audit Review did not find a person or group responsible for monitoring and managing the overall performance of each of these management elements. Further, the 2008 Audit Review did not find any process to review and manage the overall performance of the*

<sup>171</sup> Western Power (2009) [Review of Expenditure Governance - Western Power](#). Geoff Brown & Associates Ltd. 14 July 2009, p38.

<sup>172</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p49.



*wood pole asset management systems including the safety performance of these networks.*

- 5.57 In addition, the Committee notes the 2008 Audit's reflection on the absence of "any policy documents encompassing any of the wood pole management systems within the scope of this audit."<sup>173</sup> The EnergySafety 2008 Audit specifically contrasted EnergySafety's findings, with the findings of Western Power's 2008 Asset Management Report<sup>174</sup> prepared during June 2008, submitted to the ERA. That later document stated:<sup>175</sup>

*Generally it is felt that the Western Power asset management system, which is applicable to both the transmission (ETL2) and distribution (ETL1) systems, is effective and, in some areas, aligned with good industry practice. ... An Asset Management Policy is available detailing the high level requirements from the asset management system and that this policy was aligned with other organisational policies.*

*"The 2008 Audit Review also did not discover any documentation identifying the asset owner, the asset managers, or the service providers."*

- 5.58 This disparity between the findings of EnergySafety on the one hand, and those of Western Power's 2008 Asset Management Report reviewer on the other, with respect to management system policy documents, encompassing the wooden power pole asset base, is troubling to this Committee. As EnergySafety observed, the same type of documents referred to by Western Power's reviewer following its June 2008 inspection were of relevance to EnergySafety's 2008 Audit:<sup>176</sup>

*The policy documents sought would define the asset owner's requirements of the asset managers. These asset management policies would be comprehensive, but clearly include the wood pole networks, lines and structures. They would define the network performance required, the asset manager's authority and responsibilities and the reporting required from the asset manager to the asset owner.*

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<sup>173</sup> *Ibid*, p50.

<sup>174</sup> Western Power (2008) [Asset Management System - the ERA Assessment Report](#). Lloyds Register. 1 October 2008.

<sup>175</sup> *Ibid*, at p1.

<sup>176</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p50.



5.59 Unfortunately, the 2008 Audit by EnergySafety:

*... found no documents defining the asset manager's requirements of those servicing the networks, including the wood pole lines, structure and stays. These service delivery agreements between the asset manager and the service provider would define the service activities and performance required the authority and responsibilities of the parties to the agreements and the reporting necessary from the service providers to the asset manager.*

*The 2008 Audit Review also did not discover any documentation identifying the asset owner, the asset managers, or the service providers. From the activities observed it appears that the Manager Standards, Policy and Data Quality, and the Manager Network Performance within Western Power's Customer Service Division are the asset managers. The service providers were generally the branches and sections within Western Power's Service Delivery Division and the contractors engaged to support them. Neither the managers within the Customer Service Division, the service providers within the Service Delivery Division or the contractors working for them believed or expected the asset manager to have any oversight or exercise any review of the service delivery performance.*

*There was evidence of some formal reporting of the wood pole safety performance and management activities to the Board from the Manager Network Performance. This begs the question as to who is the asset owner. Is the asset owner the Western Power Board, the Chief Executive Officer or the General Manager Customer Services? Again, other than the Quarterly Board Report there was no evidence of the oversight and review that would be expected from the asset owner of the asset manager's activities and performance.*

*"Asset lives, in some cases, have been extended due to increased knowledge of the system indicating that assets are capable of lasting longer than theoretical mean time to failure."*

5.60 The Committee notes that the 2008 Asset Management Report<sup>177</sup> prepared for Western Power, and submitted to ERA, and referred to above, rates Western Power's:

<sup>177</sup> Western Power (2008) [Asset Management System - the ERA Assessment Report](#). Lloyds Register. 1 October 2008.

“Asset Planning”,<sup>178</sup> “Asset Creation and Acquisition”,<sup>179</sup> “Asset Disposal”,<sup>180</sup> “Environmental Planning”,<sup>181</sup> and, “Asset Operations”<sup>182</sup> as either “Good” or “Adequate”.

- 5.61 The 2008 Asset Management Report, with respect to “Asset Maintenance” (components such as *Maintenance policies*, *Maintenance plans*, *Failure analysis*, and, *Maintenance costs*), assessed these as being “Adequate”. “Improvement” was only assessed as being specifically required in the areas of, “Regular inspections”,<sup>183</sup> and, “Risk management”.<sup>184</sup> The relevant findings for, “Regular inspections” and “Risk management” were, respectively, as follows:

<i>Effectiveness criteria</i>	<i>Review approach</i>	<i>Audit findings</i>
<i>Regular inspections are undertaken of asset performance and condition</i> <sup>[185]</sup>	<i>Confirm the policies and procedures have been followed during the review period by testing of maintenance schedules, analysis of costs, etc</i>	<i>Asset lives, in some cases, have been extended due to increased knowledge of the system indicating that assets are capable of lasting longer than theoretical mean time to failure. This methodology has the potential to cause resource/funding problems in the future as many assets will reach the extended end of life together. However it is likely that some assets will fail before this extended end of life as failures will generally occur around the mean time to failure. This could substantially increase operational expenditure. Therefore, especially for Distribution assets, it is important that good condition information is also available to complement the age profile data such that more</i>

<sup>178</sup> *Ibid*, at pp10-12.

<sup>179</sup> *Ibid*, at pp13-14.

<sup>180</sup> *Ibid*, at pp15-16.

<sup>181</sup> *Ibid*, at pp17-18.

<sup>182</sup> *Ibid*, pp19-21.

<sup>183</sup> *Ibid*, p22.

<sup>184</sup> *Ibid*, p24.

<sup>185</sup> *Ibid*, p22. See also, notes from interview with the relevant electrical engineer, at p40: “It was also noted that the age information of some assets was poor and therefore the overall replacement scenarios may be inaccurate.”

		<p><i>informed decisions can be made for feeding into the capital expenditure budgeting process. This will inevitably mean, to maintain an acceptable level of system reliability, an increase in capital expenditure budget will be required. Although regular inspections of the assets are undertaken, it was noted that during the period of the audit condition information especially on the Distribution System has been insufficient.</i></p>
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...

<p><i>Risk management is applied to prioritise maintenance tasks<sup>[186]</sup></i></p>		<p><i>For the period of the audit, risk management processes are not evident in the prioritisation of maintenance tasks. It is apparent that engineering judgement is applied, and this can be a pragmatic way to deal with risk providing justifications are documented and subjected to appropriate peer review.</i></p> <p><i>There were examples of risk assessments: the catalogues of asset condition defined severity levels of defects and maximum periods for rectification. It was stated that maintenance activities will form part of the risk management process for the 08/09 work programme.</i></p>
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*...all available information, including in the above extract, suggests that Western Power's knowledge of its wooden power pole asset base was deficient to the point that Western Power was unable to make informed decisions*

...

- 5.62 The Committee has found no evidence in its inquiry, from information available from the time of Western Power's 2008 Asset Management Report, to support the reviewer's finding that "*Asset lives, in some cases, have been extended due to increased knowledge of the system*" with respect to wooden power poles. Rather, to the contrary, all available information, including in the above extract, suggests that Western Power's knowledge of its wooden power pole asset base was deficient to the point that Western Power was unable to make informed decisions about this key asset.
- 5.63 The Committee notes that Western Power's 2008 Asset Management Report also rated Western Power's Asset "*Management Information System*" as uniformly "*Good*", with the sole exception of the requirement that there should be "[a]*dequate system documentation for users and IT operators*". The reviewer observed of this aspect that:<sup>187</sup>

*Measures are in place to verify the accuracy of data entered onto the various databases. However the measures around the timeliness of data received from the field need to be improved.*

- 5.64 The Committee notes that substantially the same concerns were raised as recently as October 2011 by Western Power's most recent Asset Management Systems reviewer, GHD Pty Ltd. See paragraph 7.115 below for more detailed consideration.

*The extent to which these findings are at odds with EnergySafety's prior findings in 2006 and subsequent findings 2009, together with those of the ERA in 2009, is a matter of significant concern to the Committee.*

- 5.65 The Committee notes that Western Power's 2008 Asset Management Report rated Western Power's "*Capital expenditure planning*"<sup>188</sup> as uniformly "*Good*", with the sole observation that the asset condition information about the transmission network was significantly better than the condition information about the distribution network.<sup>189</sup> The extent to which these findings are at odds with EnergySafety's prior findings in 2006 and subsequent findings in 2009, together with those of the ERA in 2009, is a matter of significant concern to the Committee. This is especially so, given that there is a marked absence of detailed consideration of any adverse regulatory findings relevant to asset management systems.

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<sup>187</sup> *Ibid*, p26.

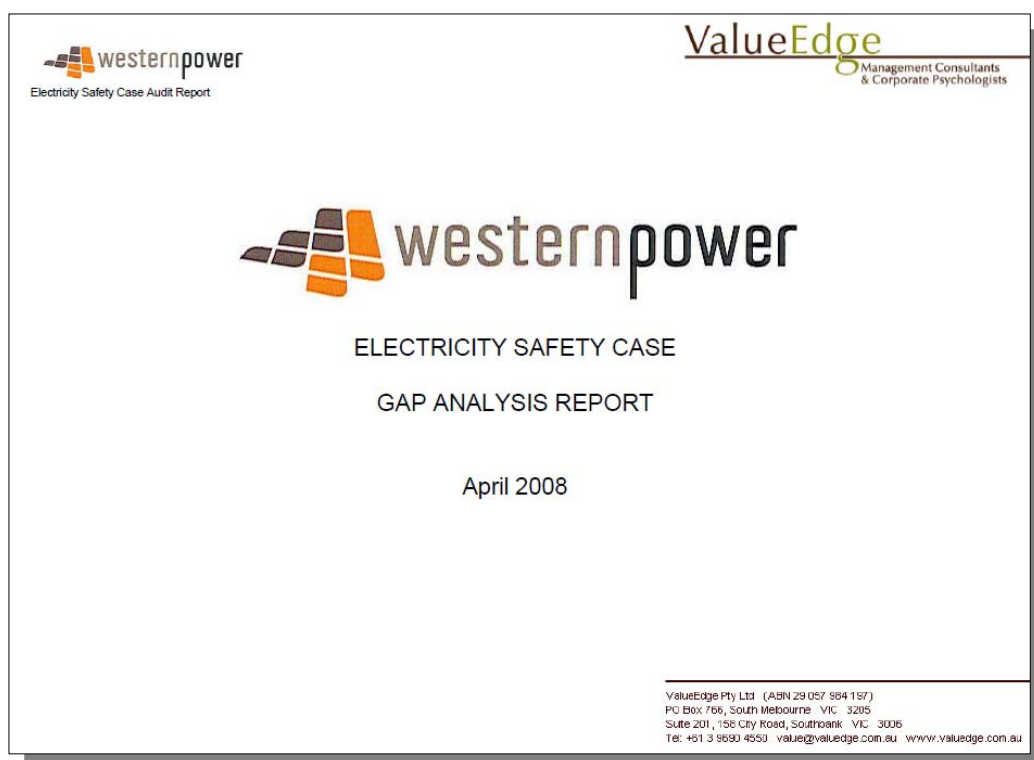
<sup>188</sup> *Ibid*, pp34-35.

<sup>189</sup> *Ibid*, p35.

- 5.66 As discussed in paragraph 4.11 above, Western Power’s 2008 Asset Management Report author noted, in the context of the 2008 Asset Management Report (based on Western Power’s advice at interview), that:<sup>190</sup>

*It was noted that an external audit had been conducted by the Department of Energy [sic] as part of the Safety Case audit. The external audit findings from the Safety Case were made available and it was noted that the Asset Management System had received a Green rating with no deficiencies.*

- 5.67 The Committee has obtained a copy of the “Department of Energy” publication referred to in the preceding paragraph. The cover page of this publication is as follows:



- 5.68 The Committee does not accept that any reasonable reader could conceivably mistake the above document with anything other than a Western Power publication, produced in association with the consultants, ValueEdge. When this fact was raised with Western Power by the Committee at a public hearing, no plausible explanation for the

<sup>190</sup>

*Ibid*, p60.

misattribution was provided.<sup>191</sup> Instead, Western Power has deliberately and repeatedly referred to this as a mere “typographical” error.<sup>192</sup>

- 5.69 The Committee was not satisfied with Western Power’s characterisation of this potentially significant misattribution. For this reason, the issue was specifically raised with Western Power in a subsequent question on notice:<sup>193</sup>

**10. The transcript (at pages 25 and 26) refers to the Western Power/ValueEdge "Safety Case Gap Analysis" Audit document produced in 2008 for Western Power. The Committee requests an answer to the following questions:**

**a) Is it conceivable that any reasonable person would mistake the document for "Department of Energy" publication?**

a. *It is not conceivable that any reasonable person would mistake the document for a "Department of Energy" publication. However, that is not what has occurred with the Lloyd’s Register audit report, it is merely a typographical error that was not picked up during the review of the detailed 74 page document (the error occurred once, on page 60 of the document).*

*What Lloyd’s were attempting to articulate was that a recent audit had been undertaken by an independent auditor approved by EnergySafety for the purposes of establishing a base line for an Electricity Safety Case.*

- 5.70 It should be noted that Western Power has provided the Committee with two further submissions on this matter, but still insists that it was a single typographical error.<sup>194</sup>

*The Committee does not accept that any reasonable reader could conceivably mistake the above document with anything other than a Western Power publication, produced in association with the consultants, ValueEdge.*

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<sup>191</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p25.

<sup>192</sup> This was most recently the case in a letter from Mr Doug Aberle, Managing Director, Western Power “*Response to Questions on Notice*”, 23 December 2011, p2.

<sup>193</sup> Letter from Mr Doug Aberle, Managing Director, Western Power, “*Response to Questions on Notice*”, 5 December 2011, p14.

<sup>194</sup> Letter from Mr Doug Aberle, Managing Director, Western Power, “*Response to Questions on Notice*”, 23 December 2011, p2; and, letter from Mr Doug Aberle, Managing Director, Western Power, “*Response to Questions on Notice*”, 4 January 2011, p4.

- 5.71 The Committee does not accept Western Power's insistent characterisation of this misattribution as a 'simple typo'. The Committee notes, for example that, contrary to the assertion made in Western Power's answer to a question on notice extracted above, the misattribution occurred on two pages of the relevant report rather than one (that is, pages 36 and 60). In addition, during a subsequent private hearing, when the Committee attempted to ascertain from Western Power's Managing Director what particular words in the 2008 Asset Management report extracts were mistranscribed, he was unable to identify these.
- 5.72 This Committee is similarly concerned by Western Power's attempt to characterise the impact of the misattribution identified above as being insignificant. The following question on notice, and its related response from Western Power, are illustrative of this point:<sup>195</sup>

***b) Did Western Power owe any of its subsequent reviewers, or the ERA, a duty to correct the record about the "Safety Case" audit document?***

*b. Had Western Power become aware of the typographical error, it would have corrected the master document and informed the ERA.*

*It should be noted, however, that the reference to the Electricity Safety Case Gap Analysis Report was not a crucial component of Lloyd's audit. Lloyd's undertook their own thorough audit and reached their own conclusions independently of the Gap Analysis Report.*

*The Committee does not accept Western Power's insistent characterisation of this misattribution as a "simple typo".*

- 5.73 The Committee does not accept this characterisation of either the nature or effect of Lloyd's Register's misattribution of the Western Power/ValueEdge Safety Case audit document. In the 2008 Asset Management Report, this document was one of only two pieces of Audit evidence relied upon by Lloyd's Register in forming its conclusion that Western Power's "Asset Management System Review" audit criterion evinced an "Adequate" level of risk control. In addition, this assessment has subsequently been

<sup>195</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "Response to Questions on Notice", 5 December 2011, p14.

expressly relied upon by two of Western Power's electricity licence performance auditors.<sup>196</sup>

- 5.74 In a subsequent submission, Western Power has advised that Lloyds Register took very limited notice of the Western Power/ValueEdge Safety Case audit document.<sup>197</sup> This seems to suggest that Lloyds Register's assessment on the relevant issue was mainly derived from a single internal Western Power report. If this is, in fact the case, the implications for the validity of Lloyd's Register's Report are even more troubling. Even when this matter was brought to Western Power's attention, it took this Committee's insistence, before an undertaking was given by the Managing Director of Western Power to correct the record with respect to this matter. Indeed, Western Power's conduct with respect to this issue is a matter that the Committee has determined will be addressed separately in a later report.

*Even when this matter was brought to Western Power's attention, it took this Committee's insistence, before an undertaking was given by the Managing Director of Western Power to correct the record ...*

- 5.75 The Committee has been advised by EnergySafety that it informed Western Power on 18 September 2008 that it rejected the "*Electricity Safety Case*" submission for which the Western Power/ValueEdge Safety Case audit document had been prepared, and provided detailed reasons for its rejection of that entire submission. Given this fact, the Committee is of the view that it was incumbent on Western Power to advise its Asset Management System reviewer immediately about both the misattribution of the document, and the fact of its comprehensive rejection by EnergySafety. Given that this document was one of only two pieces of evidence relied upon by the Asset Management System reviewer to express a favourable opinion on "*Asset Management System Reviews*", the Committee has formed the conclusion that the validity of Western Power's 2008 Asset Management Report is open to question. As indicated in the previous paragraph, this matter will be dealt with in greater detail in a later report.
- 5.76 The Committee notes that the 2008 Western Power Licence Report, dated 5 November 2008, and submitted to the ERA also refers to an "*Asset Management Policy*" as having formed part of the evidence upon which that reviewer made its findings.<sup>198</sup> It

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<sup>196</sup> Western Power (2008) [\*Electricity Distribution Licence \(EDL1\) Performance Audit Report\*](#). Ernst & Young, November 2008, at p105; and, Western Power (2011) [\*Electricity Networks Corporation \(Western Power\) Electricity Distribution Licence \(EDL 1\) Performance Audit Report\*](#). Grant Thornton, October 2011, p221.

<sup>197</sup> Letter from Mr Doug Aberle, Managing Director, Western Power, (DM#: 8955365), 5 January 2012, p1.

<sup>198</sup> Western Power (2008) [\*Electricity Distribution Licence \(EDL1\) Performance Audit Report\*](#). Ernst & Young, November 2008. At "[\*Appendix A Audit Program, Risk Assessment and Detail\*](#)", p23.



follows, therefore, that EnergySafety's concerns with respect to the 2008 Asset Management Report highlighted above, apply equally to the 2008 Western Power Licence Report.

- 5.77 No reference was made in the 2008 Asset Management Report to any of the findings of the 2006 Audit that were of direct relevance to the 2008 Asset Management Report. This failure to refer to publicly available reports that were of direct relevance to the subject matter of both the 2008 Asset Management Report, and the 2008 Western Power Licence Report raises questions for this Committee about the reliability of such reviews. Indeed, the inconsistencies between these different sources of information, together with the caveats contained in the reviewer's detailed findings, mean that the Committee is not satisfied that the overall positive findings of the 2008 Asset Management Report were warranted at the time they were made. When this issue was raised with the ERA before this Committee, the following exchange occurred:<sup>199</sup>

*... the Committee is not satisfied that the overall positive findings of the 2008 Asset Management Report were warranted at the time they were made.*

**The CHAIRMAN:** *We have just talked a little about Lloyd's Register. But what about Western Power? What about Western Power's role in this? Do you think that they have a responsibility to clear this up or were they blindly oblivious to what was happening here?*

**Mr Rowe:** *Western Power have a responsibility to put before the regulator information as factual as they can on all occasions.*

**Hon JIM CHOWN:** *But that has not been taking place, has it, to your knowledge?*

**Mr Rowe:** *I said to you last time that I cannot remember a circumstance when I thought that I was being deliberately lied to. I think I said to you last time that because of some of the concerns that I have about their systems and processes, whether they necessarily can be confident that what they are giving me is right is a different question. You have raised some issues today which, yes, I would agree, Chair, that there is probably some argument that Western Power should have alerted us to those issues.*

<sup>199</sup> Mr Lyndon Rowe, Chairman, Economic Regulation Authority, *Transcript of Evidence*, 7 November 2011, p15.

- 5.78 When this issue was put directly to Western Power's management in a public hearing before this Committee, the Committee was initially given a confused response, as the following exchange demonstrates:<sup>200</sup>

***The CHAIRMAN:** Given my previous question, did Western Power or any of the subsequent reviewers or the ERA have a duty to correct any the record about the safety case audit document that has been used for years?*

***Mr de Laeter:** The process that the ERA uses is to ask Western Power to select on their behalf an auditor. We have to submit, after going through a tender process, our preference. If the ERA accepts the auditor that we put forward, then that auditor, which is an engineering firm typically of the right credentials, provides the report for us to give to the ERA. That process of auditing—that is a formal audit against our licence requirements, transmission and distribution—is required to be carried out at least every two years; and that is the process by which we get an updated perspective, as does the ERA, of our compliance against the requirements in our transmission and distribution licences.*

- 5.79 As a matter of first principle, it will be appreciated that Mr de Laeter's response above did not answer the question asked. However, there is a potentially more troubling aspect to the comments extracted above. This is in the suggestion that the Western Power licence review auditors are selected by Western power 'on behalf' of the ERA.

*"Western Power have a responsibility to put before the regulator information as factual as they can on all occasions."*

- 5.80 The question of whom it is that review auditors are engaged by, was characterised in a similar manner by the Managing Director of Western Power at a later stage of the same public hearing as follows:<sup>201</sup>

***Mr Aberle:** I draw your attention to that. ...*

*The next page really summarises our asset management systems and points out that, as at now, we argue that they are fit for purpose. The ERA's auditors, GHD, found overall the statements that are there—that is, the systems are adequately defined, the documents are current,*

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<sup>200</sup> Mr Mark de Laeter, General Manager, Networks, Western Power, *Transcript of Evidence*, 21 November 2011, p26.

<sup>201</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p43.

*the data systems are functioning effectively and Western Power's staff are proficient in the use of those documents. ...*

5.81 During the passage of evidence referred to in the preceding paragraph, the Managing Director of Western Power was referring to a document that he had tabled at the beginning of the hearing entitled; "*Western Power serves the WA community interest*". This document, on the fourth page, contains the following text:

- *The October 2011 report referred to by the Committee - from auditors retained by the ERA - gave Western Power the highest rating possible for its asset management systems*
- *The ERA's auditors (GHD) found that overall:*

5.82 The fifth page of the document entitled; "*Western Power serves the WA community interest*" contains the page heading; "*ERA asset Management review of Western Power by GHD*".

*Western Power has repeatedly characterised the nature of the engagement of its licence reviewers in an inaccurate manner in evidence before this Committee, as part of a deliberate strategy to achieve a self-serving outcome.*

*...*

*... licence performance audits and asset management reviews which are required under Western Power's licensing obligations are conducted by reviewers that are engaged by Western Power.*

5.83 In addition, Western Power has subsequently repeated this characterisation of the relationship between its licence and asset management system reviewers and the ERA in a subsequent letter relating to questions taken on notice.<sup>202</sup> According to the Managing Director in this latest communication:

*My updated advice is that Western Power did not consider that it had a duty to advise subsequent auditors of these developments because the auditors were performing an audit on behalf of the Economic*

<sup>202</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "*Response to Questions on Notice*", 23 December 2011, p4.

*Regulation Authority that was not considering Western Power's  
Electrical Safety Case.*

- 5.84 The Committee has formed the view, on the basis of the evidence outlined in the preceding paragraphs, that Western Power has repeatedly characterised the nature of the engagement of its licence reviewers in an inaccurate manner in evidence before this Committee, as part of a deliberate strategy to achieve a self-serving outcome. At a public hearing of this Committee, and while under oath, on three occasions, senior management of Western Power represented to the Committee, both verbally and in writing in a powerpoint presentation tabled at the hearing, and again later in a written submission relating to questions taken on notice, that its reviewers are retained or engaged by the ERA.
- 5.85 This is not correct.
- 5.86 Accordingly, this Committee is gravely concerned about Western Power's management culture, and about Western Power's corporate attitude to Parliamentary accountability. These concerns are addressed further in sections 8, 9 and 10 of this Report below.
- 5.87 To the extent that the response above appears to misdescribe Western Power's regulatory process, it is of concern to the Committee in its own right. The regulatory process applicable to the ERA and Western Power has been described the "*propose-and-respond*" model. Under this model, licence performance audits and asset management reviews which are required under Western Power's licensing obligations are conducted by reviewers that are engaged by Western Power. It is true that the ERA must approve the auditor in question prior to the engagement, but it is Western Power who engages the consultant. At the conclusion of the engagement, Western Power submits the review report that it has settled with its own consultant, to the ERA for the ERA's subsequent assessment. At all times, under the present system, the consultant is engaged by Western Power. As anyone familiar with such arrangements will appreciate, there is usually a process of finalising drafts of such consultancy reports by means of formal and informal exchanges between the contracting entity on the one hand, and the consultant on the other. Only when such a process has been concluded, is the final report submitted to the contracting entity - in this case, Western Power.

*... this Committee is gravely concerned about  
Western Power's management culture, and  
about Western Power's corporate attitude to  
Parliamentary accountability.*

5.88 This process was discussed in evidence before the Committee by the ERA, in the context of the deficiencies identified in preceding paragraphs, in the following terms:<sup>203</sup>

*Mr Rowe:* Yes. The provider is required to submit the name of the auditor and the people who are conducting the audit, and we do an assessment of whether we think they have got the capacity to undertake the audit; and indeed, as I have just mentioned, there have been occasions when we rejected the proposed auditor. In fact, in another industry we just recently rejected an auditor for some audits for the water industry. It was put forward by a number of local governments.

*Hon JON FORD:* How do you do the prequalification? Do you carry that out or do you rely on Western Power, for instance?

*Mr Rowe:* We rely on the information that is put to us by the auditor and Western Power.

*Mr Kelly:* The licensee would certainly provide us with the CVs and the proposed audit team and the audit manager and so forth.

*Hon JON FORD:* You had said to us in previous evidence that one of the problems that you had found—I think it was you guys—was that the consultants, because it is such a small market, tend to be a customer at some stage or other to Western Power.

*Mr Rowe:* I think I made the comment last time, in a slightly different context. It was to do with consultants for access arrangements, and I made the comment that at the end the day he who pays the piper calls the tune; and people always have an eye on who the next piper is going to be, or who the next payer is going to be.

“... at the end the day he who pays the piper calls the tune; and people always have an eye on who the next piper is going to be, or who the next payer is going to be.”

*Hon JON FORD:* And that is not restricted to this industry.

*Mr Rowe:* No. That is a fact of life.

<sup>203</sup> Mr Lyndon Rowe, Chairman, Economic Regulation Authority, *Transcript of Evidence*, 7 November 2011, p14.

**The CHAIRMAN:** *Can I ask a question, then? I gather that you have already answered this in your response, but I will ask the question directly. Did the ERA miss this failure? Was this news to you? It was clearly news to you today.*

**Mr Kelly:** *I am not sure that it is a failure. We can only go by what we are given. We receive the audit review from Western Power.*

- 5.89 The above exchange highlights a troubling weakness in the present “propose-and-respond” regulatory model – particularly in the case of such a large corporate entity as Western Power.
- 5.90 The Chair repeated the question of Western Power’s obligation to correct the record regarding the “Energy Safety Case” document to the Managing Director of Western Power.<sup>204</sup>

**The CHAIRMAN:** *Mr Aberle, I think we should be getting an answer from you.*

**Mr Aberle:** *I have not seen this document. It is clearly an error, but my response is what I gave earlier. It is possible when you are dealing additionally with a large number of audits and a great deal of material to miss that kind of thing. But my view in relation to the ERA and EnergySafety is that the constructive approach is to work responsively. It is not always feasible to work in a way that is collaborative, but we seek to work in a responsive way. That is why we put so much time in the case of the ERA into working with them leading up to AA3.*

- 5.91 This response appears to amount to a claim that Western Power was too busy to pay attention to such issues. The Committee notes that, while the Managing Director’s reply relates directly to the question as asked, it nevertheless appears to be dismissive of an important compliance obligation.

*... Western Power may have, either intentionally or carelessly, benefited from this information asymmetry at the expense of effective regulation. The Committee is concerned that, should this lack of clarity persist, an unacceptable degree of moral hazard may result.*

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Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p26.

5.92 The Committee is of the view that the reporting deficiencies highlighted in the preceding paragraphs raise troubling questions about:

- the extent to which the ERA has maintained collaborative professional relationships with EnergySafety since 2006;
- why such deficiencies and inconsistencies were overlooked by the Auditor General given his role as Western Power's financial auditor, and performance auditor;
- whether the Office of Energy, as the principal energy policy advisor to the Minister, had any responsibility to draw this system flaw to the attention of the Minister; and,
- which agency of government has an over-arching responsibility to maintain a watching brief on the big picture of energy sector regulation.

5.93 The Committee notes that the above questions suggest that there may be an unreasonable degree of information asymmetry between Western Power and its regulators. The material discussed in preceding paragraphs suggests that Western Power may have, either intentionally or carelessly, benefited from this information asymmetry at the expense of effective regulation. The Committee is concerned that, should this lack of clarity persist, an unacceptable degree of moral hazard may result.

*It should not be possible for a major electricity utility to receive conflicting asset management assessments from the safety regulator on the one hand, and the licensing regulator on the other.*

5.94 The discussion in preceding paragraphs also raises significant questions about the adequacy of current review requirements under the licensing arrangements applicable to Western Power. It should not be possible for a major electricity utility to receive conflicting asset management assessments from the safety regulator on the one hand, and the licensing regulator on the other. This allows for the possibility of the electricity utility to engage in unacceptable regulatory arbitrage, with a subsequent race to the bottom with respect to regulatory standards. The Committee's inquiries strongly suggest that the regulatory weakness in this regard lies with the current licensing requirements and not in the area of energy safety regulation. It is essential that these two related regulatory requirements be harmonised as a matter of urgency.

- 5.95 It is a further matter of interest to the Committee that Western Power, in its 2008/2009 Annual Report, made the following public disclosure:<sup>205</sup>

*POLE REPLACEMENT PROGRAM*

***The challenge***

*More than 30 per cent of Western Power's network is more than 40 years old. The network includes 630,000 wooden poles that must be inspected and maintained to ensure public safety and reliability of supply. Regular inspection and cleaning is essential to help prevent pole-top fires, caused by the build up of dust and debris on top of wooden poles.*

***The solution***

*In 2008/09 more than 195,000 poles were inspected throughout the network, almost 16,000 more than originally targeted. Of these, 9,409 wood poles were replaced at a cost of \$46.8 million. Western Power also trialled a new bundling works program whereby several jobs in a region were bundled and allocated to one contractor.*

***The result***

*The increased volume of inspections and maintenance contributed to a 60 per cent decrease in the number of pole top fires. The number of unserviceable poles replaced also increased by 100 per cent. A further benefit to Western Power was the reduction in pole replacement cost through the bundling approach, which saved the business \$6.7 million.*

*The clear impression that is conveyed in the above extract from the Annual Report was that Western Power was implementing "The solution" to the asset renewal "challenge" ...*

- 5.96 The Committee notes that this disclosure by Western Power effectively acknowledged that, without a significant asset renewal program, around 190,000 wooden power poles would exceed their expected service life by 2018/2019. Reference to the Budget Papers for 2009/2010 reveals no particular asset investment initiative addressing this requirement.<sup>206</sup> Indeed, the Budget Papers relating to Western Power for the financial

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<sup>205</sup> Western Power, [Annual Report 2008/09](#), August 2009, p17.

<sup>206</sup> Western Australia, [2009-10 Budget: Budget Statements](#). [Budget Paper No 2, Vol 3](#), p693.



year 2009/10 were remarkably similar to those for each of the years 2006/2007 to 2008/2009. No particular sense of urgency, or terminal air, is conveyed by the totality of the above extract. The Committee notes that this raises questions about the extent to which Western Power has, or has not, fully disclosed the condition of its distribution network to the sole shareholder over time. It also raises questions about the extent to which Western Power has met its accountability obligations to Parliament.

- 5.97 The Committee has formed the view that nothing in Western Power's 2008/2009 Annual Report suggests that there was a looming wooden power pole asset replacement, or safety, predicament.
- 5.98 The clear impression that is conveyed in the above extract from the Annual Report was that Western Power was implementing "*The solution*" to the asset renewal "*challenge*" which it faced. In the previous year: wooden power pole inspections were up; wooden power pole replacements were close to 10,000; funds had been allocated to the problem; efficiencies had been identified; and, pole top fires were down. However, given the acknowledged scale of "*the challenge*" facing Western Power, the Committee believes that the disclosures made in this Annual Report are as significant for what was omitted, as for what was included.
- 5.99 As for the 2008/2009 Annual Report, disclosures made in the Annual Report for 2009/2010 do not explicitly state that around a third of the wooden power poles in the network are likely to need to be replaced within the next ten years, although such an inference might be drawn, if read in conjunction with the disclosure, 63 pages later, that "*Substation plant, overhead lines and cables*" were being depreciated on a straight line basis over 50 years. Wooden power pole replacements were still only around 1.5%p per annum, or less than half the rate required to address the problem that appears to have been identified in Western Power's own disclosure. However, the Committee is struck by the particular use by Western Power of the heading "*The solution*" when discussing the corporation's response to "*The challenge*" of wooden power pole replacements. There is a distinct lack of both detail, and candour, about what is now known to have been the unfolding asset management problem facing Western Power.
- 5.100 It will also be recalled that, as highlighted above, Western Power's asset management systems were being given consistent positive assessments by its consultant reviewers, assessments that were dutifully published on the ERA website.

*There is a distinct lack of both detail, and candour, about what is now known to have been the unfolding asset management problem facing Western Power.*

## Wooden Power Pole Inspections

### *New Inspection Regime*

- 5.101 EnergySafety's 2008 Audit revealed that Western Power responded to the 2006 Audit by:<sup>207</sup>

*... outsourcing the pole ground line inspection field activity to Transfield and Logsys, which has lifted the pole inspection rates to appropriate levels. This change is eliminating the backlog of poles not inspected to the 4-year cycle.*

- 5.102 According to EnergySafety, this changed inspection regime (which was “*trending towards 250,000*” inspections per annum by late 2008),<sup>208</sup> had introduced two new processes into the inspection of Western Power's wooden power pole asset management system. These new processes were firstly, designing and managing the inspection service agreements; and second, designing and managing the program of inspections.

- 5.103 EnergySafety's 2008 Audit revisited questions surrounding Western Power's wooden power pole inspection methodology, frequency and associated record systems that were raised in the 2006 Audit. As a general observation, the 2008 Audit remarked that:<sup>209</sup>

*The June 2008 edition of the Network Pole Inspection Manual does not differ in any significant detail from the April 2003 edition mentioned in the Logsys and Transfield inspection contract documents. The changes in this manual are unlikely to improve the wood pole and stay inspections performed by Western Power's contractors. The concerns identified in the 2006 Audit concerning Western Power's wood pole inspection practice have not been addressed.*

*...EnergySafety acknowledged that the scale of Western Power's inspection regime had markedly improved since the 2006 Audit ...*

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<sup>207</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p14.

<sup>208</sup> *Ibid*, p33.

<sup>209</sup> *Ibid*, p27.

- 5.104 As indicated above, EnergySafety acknowledged that the scale of Western Power's inspection regime had markedly improved since the 2006 Audit. As a result, the inspection backlog was being aggressively reduced.<sup>210</sup> In addition, the quality assurance provided by the inspection practices was also markedly improved since the 2006 Audit.
- 5.105 EnergySafety did, however, comment on the fact that, after a 12-month period in operation, the new quality assurance process which was being used had still not been documented.<sup>211</sup> In addition, there was still insufficient evidence that wooden power poles that were encased in brick paving or concrete were being adequately inspected below ground according to Western Power's internal inspection manual.<sup>212</sup>
- 5.106 EnergySafety's 2008 Audit also indicated that, as was the case for the development of the stay and reinforcement service agreement, there were significant deficiencies in the development of the inspection service agreements.<sup>213</sup> These deficiencies led EnergySafety to observe that:<sup>214</sup>

*It is unlikely that this inspection and service contract as it is presently structured will deliver an acceptable wood pole condition assessment, even with an effective pole inspection practice."*

#### *Wooden Power Pole Inspection Methodology*

*"... Western Power's June 2009 target date does not recognise the work and rigour needed to identify and implement an alternative pole inspection practice ..."*

- 5.107 The 2008 Audit also reviewed Western Power's response to concerns raised in the 2006 Audit about the inadequacies of the 'sound-dig-and drill' and 'good-wood' inspection methodology adopted by Western Power, as an indicator of wooden power pole serviceability. The 2008 Audit made reference to a June 2008 report, commissioned by Western Power into its wooden power pole inspection practices. This report found a number of deficiencies in contemporary practice, including:<sup>215</sup>

<sup>210</sup> An estimate of 73,000 uninspected wooden power poles over the previous five years was provided by Western Power during a review of its asset management system (Western Power (2008) [Asset Management System - the ERA Assessment Report](#), Lloyds Register, 1 October 2008, at p51).

<sup>211</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p28.

<sup>212</sup> *Id.*

<sup>213</sup> *Ibid*, p29.

<sup>214</sup> *Ibid*, p30.

<sup>215</sup> *Ibid*, p31.

- *The quality of the Network Pole Inspection Manual,*
- *Indifferent adherence to the inspection process,*
- *The practice neglects the importance of the loss of good wood from the outside of the pole below ground,*
- *The lack of post mortem investigations of failed poles, and*
- *The absence of a technical expert in wood pole inspection.*

5.108 EnergySafety's 2008 Audit observed that while Western Power had introduced post mortem examination of all wooden power pole failures subsequent to the June 2008, as at the date of the 2008 Audit, no positive impact on safety outcomes was evident. The Committee notes that forensic testing of wooden power pole failures did not, in fact occur until September 2010 (see paragraph 8.16 below).

5.109 The 2008 Audit observed that Western Power was attempting to develop an appropriate inspection regime that would deliver improved safety outcomes through the use of more accurate wooden power pole serviceability criteria. As the 2008 Audit noted:<sup>216</sup>

*Western Power intends to decide upon the pole inspection practice it will adopt by the end of June 2009.*

*EnergySafety is encouraged by the endeavours Western Power is making to identify the best pole inspection practice for its operations, but is not convinced that the trials and assessments undertaken will deliver an acceptable outcome. In EnergySafety's view, Western Power's June 2009 target date does not recognise the work and rigour needed to identify and implement an alternative pole inspection practice that will achieve the safety outcomes required.*

*"... inspections as currently undertaken are not fully consistent with industry best practice ..."*

5.110 EnergySafety's 2008 Audit further observed that:<sup>217</sup>

*Western Power is giving a high priority to finding the best pole inspection practice that will reliably identify all unserviceable poles. The Australian electricity supply industry has been searching for this*

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<sup>216</sup> *Ibid*, p32.

<sup>217</sup> *Ibid*, p44.

*practice for 30 years. Some inspection practices are better than others and some are better applied than others. Network operators in the USA and New Zealand have adopted some of the non-invasive systems considered by Australian network operators. None of these pole inspection practices has demonstrated the ability to identify every unserviceable pole and only the unserviceable poles.*

- 5.111 The Committee notes the following related observation, concerning Western Power's current inspection services contracts, contained in an independent review of Western Power's expenditure governance prepared for the ERA in mid-2009:<sup>218</sup>

*A significant shortcoming in the scope of work is that excavation and inspection of wooden poles below ground level is required at one location only rather than around the full pole circumference. Hence inspections as currently undertaken are not fully consistent with industry best practice with the result being that wood rot below ground level may not be detected. This would seem to be a significant deficiency with the existing program and Western Power has included a provision in its [AA2] expenditure forecast for additional funding to allow the inspections to be brought up to standard.*

- 5.112 EnergySafety's 2008 Audit made reference to the broader regulatory environment within which Western Power operates. In particular, the content of Western Power's submission to the ERA relating to inspection costs was highlighted. The 2008 Audit noted that:<sup>219</sup>

*An increase in the unit cost of the pole inspections will be unavoidable if pole inspectors are to do this work with the diligence needed to identify unserviceable poles. However, the market's willingness to carry out the pole inspections with satisfactory diligence and deliver other efficiencies has not been assessed.*

*... Western Power's ability to actually manage the emerging problem of the condition of its wooden power pole asset base, was being openly questioned by both of its operational regulators, and one of its own consultant reviewers.*

<sup>218</sup> Western Power (2009) [Review of Expenditure Governance - Western Power](#). Geoff Brown & Associates Ltd. 14 July 2009, p36.

<sup>219</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p33.

- 5.113 The Committee notes that, in late 2009, with direct reference to Western Power's "substantial increases in forecast activities and costs for preventative maintenance", the ERA observed that:<sup>220</sup>

*Western Power provided to the Authority on a confidential basis a report by PB Associates that reviewed the delivery strategy. PB Associates concluded that Western Power's delivery plan for capital and operating works was insufficiently advanced or robust to provide certainty of full implementation of the works program and that reducing the works program by three to five per cent would be prudent.*

*... three years after EnergySafety's 2006 Audit, Western Power still had an inadequate assessment methodology for determining the serviceability of its in-service network wooden power poles.*

- 5.114 Thus, the Committee was deeply troubled to discover, that in the second half of 2009, three years after EnergySafety's 2006 Audit, Western Power still had an inadequate assessment methodology for determining the serviceability of its in-service network wooden power poles. In addition, Western Power's ability to actually manage the emerging problem of the condition of its wooden power pole asset base, was being openly questioned by both of its operational regulators, and one of its own consultant reviewers.

#### *Internal Western Power Inspection-Related Systems*

- 5.115 The Committee at this point notes the significant concerns raised in a 2009 decision by the ERA regarding Western Power's management practices and corporate culture in the context of asset management, in the following extract from the ERA's final decision on Western Power's AA2 submission:<sup>221</sup>

*470. Subsequent to the Draft Decision, Western Power made a submission to the Authority that includes further information to justify actual and forecast costs, including reports from consultants on the extent to which new facilities investment in the first access arrangement period meets the requirements of the Access Code to be added to the capital base for the SWIN.*

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<sup>220</sup> Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009, p146.

<sup>221</sup> *Ibid*, p126.

*It is evident from Western Power's submission that Western Power made information available to its own consultant(s) that was not made available to the Authority prior to the Authority's Draft Decision, despite the requests made to Western Power for the provision of all relevant information.*

471. *Adding to the context of a trend of increasing costs for Western Power and a lack of information to determine whether these costs meet the relevant tests under the Access Code, information from a range of sources indicate substantial deficiencies in Western Power's management and governance processes as they relate to the undertaking and costs of operating and capital activities. Of particular concern to the Authority has been information to indicate the following.*

*"... information from a range of sources indicate substantial deficiencies in Western Power's management and governance processes as they relate to the undertaking and costs of operating and capital activities."*

- *A failure of Western Power to maintain processes and documentation to sustain rigorous and accurate assessments of capital projects and programs against the requirements of the new facilities investment test.*
- *Deficiencies of planning and design processes that create potential for inefficient engineering of capital projects.*
- *Systematic shortcomings in governance processes for major works, particularly during the course of much of the first access arrangement period, including:*
  - *poor internal cost estimating processes;*
  - *a possibility that Western Power sometimes specifies requirements for equipment over and above industry standards and norms, potentially limiting competition amongst potential suppliers;*

- *evidence of overcharging of Western Power by contractors, enabled by poor contractual arrangements and limited reconciliation of purchase orders, quotations and invoices; and*
- *excessive contingency provisions in project budgets.*
- *A lack of quality control for works undertaken by contractors, and instances of contractors failing to undertake works in accordance with specifications, notably in the case of inspection of wood poles.*

*"The context of the Authority's assessment of costs for the second access arrangement period is, therefore, a trend of substantially increasing costs over the course of the first and second access arrangement periods, a lack of information to justify these increases and evidence of deficiencies in management and governance processes."*

472. *There is also evidence of deficiencies in the management of network assets and operations that may give rise to inefficiencies in capital works and operating and maintenance activities. This evidence includes the following.*

- *Western Power's contraventions of its transmission (ETL2) and distribution (EDL1) licences. Contraventions relate, in part, to deficiencies of Western Power's asset management system, including:*
  - *a lack of understanding of key processes for operational and capital work programs; and*
  - *poor documentation of the condition of the distribution system leading to reactive and imprecise systems for maintenance activities.*
- *Confidential information obtained by the Authority relating to Western Power's budgeting of capital and operating activities.*



473. *The context of the Authority's assessment of costs for the second access arrangement period is, therefore, a trend of substantially increasing costs over the course of the first and second access arrangement periods, a lack of information to justify these increases and evidence of deficiencies in management and governance processes.*
474. *The Department of Treasury and Finance has submitted that a means of dealing with uncertainty in whether forecast increases in costs satisfy the requirements of the Access Code may be to allow the carryover of non-capital costs over and above forecasts from one access arrangement period to the next. The Authority considers that such a carryover is not consistent with the scheme of regulation established by the Access Code and the Code objective. With the exception of certain carryover mechanisms that create incentives for efficient expenditure, the scheme of regulation under the Access Code is to establish the price control on the basis of a forecast of costs. The risk faced by the service provider of having to bear cost overruns relative to forecasts (but as well the ability to retain the benefit of any out-performance of forecasts) provides incentives for the service provider to seek to achieve improvements in the efficiency of its operations.*

5.116 The above determination of the ERA in 2009 is discussed in more detail below commencing at paragraph 7.1.

*The Committee is persuaded that the ERA's assessment is a superior method of imposing an economic incentive for Western Power to improve its "management and governance processes".*

5.117 It is apparent to the Committee that the difference of opinion between the then Department of Treasury and Finance (**Treasury**) and the ERA referred to in the extracted paragraph 474 of the 2009 the ERA decision is highly significant. Treasury appears to have argued that the principal cause of Western Power's higher than expected costs over the life of the first Access Arrangement period (**AA1**) was 'uncertainty' in the cost environment. The ERA on the other hand, formed the view that a significant proportion of these unforeseen costs was due to "*substantial deficiencies in Western Power's management and governance processes as they relate to the undertaking and costs of operating and capital activities*". On Treasury's assessment, the unforeseen costs should be eligible to be recouped from customers

over the life of Western Power's AA2. The ERA's view was that Western Power should be expected to bear the cost of its own "*substantial deficiencies*" of "*management and governance processes*".

- 5.118 The Committee is persuaded that the ERA's assessment is a superior method of imposing an economic incentive for Western Power to improve its "*management and governance processes*". The Committee accepts that the view which was articulated by Treasury has a significant risk of reversing the present balance of incentives and could encourage inefficient monopolistic trading. This, in turn, would run the risk of introducing significant moral hazard, at the expense of efficiency gains and any subsequent moderating influence on customer cost pressures.

#### *Wooden Power Pole Embedment Issues*

- 5.119 Incorrect wooden power pole embedment was a further serviceability issue raised by EnergySafety in its 2006 Audit. As the 2008 Audit observed:<sup>222</sup>

*Correct pole embedment is a safety issue because:*

- a. Under-embedment can result in poles falling over due to footing failures.*
- b. Over-embedment can cause unsafe conductor ground clearances.*

- 5.120 To the extent that this issue was addressed during the 2008 Audit, EnergySafety observed that it "*did not find any reference in the [Western Power] manuals and work practices to checking embedment.*"<sup>223</sup>

#### **Unassisted Wooden Power Pole Failures in the Rural Network**

*... a pattern could be observed whereby, in the rural network, the majority of wooden power pole failures involved wooden power poles that were untreated, unreinforced jarrah.*

- 5.121 As indicated at paragraph 3.54 above, EnergySafety, in its 2006 Audit, found that a pattern could be observed whereby, in the rural network, the majority of wooden power pole failures involved wooden power poles that were untreated, unreinforced jarrah. Furthermore, these poles failed in weather conditions below the design

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<sup>222</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p34.

<sup>223</sup> *Id.*

specification which pertained at the time at which they were installed. This was, perhaps unsurprising given that:<sup>224</sup>

*The youngest of these untreated jarrah poles are 29 years old and the oldest are approximately 60 years old. The Australian Standard for wood poles (AS 2209) quotes the service life of untreated wood poles in ground to be 15 to 25 years, and above ground 40 years.*

*Many of these untreated and unreinforced jarrah poles are well beyond their prudent service life of 25 years. Any reinforced, but untreated, jarrah poles older than 40 years are also beyond their prudent service life.*

*Even these older reinforced poles may not have the necessary strength and safety factors to comply with the 1991 and later versions of C(b)1 using the more prudent 50 MPa Modulus of Rupture.*

- 5.122 Despite these findings in the 2006 Audit, EnergySafety observed, in the 2008 Audit, that “Western Power has not addressed the rural pole risk issue, identified in the 2006 Audit.” This being the case, EnergySafety proceeded to stress that; “Prompt and prudent action is required to identify the extent of the risk and to replace poles consistent with the risks identified.”<sup>225</sup>

... EnergySafety observed, in the 2008 Audit, that “Western Power has not addressed the rural pole risk issue, identified in the 2006 Audit.”

<sup>224</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p62.

<sup>225</sup> *Ibid*, p63.

**6 ENERGYSAFETY'S 2009 INSPECTOR'S ORDER ON WESTERN POWER**

- 6.1 EnergySafety continued to monitor Western Power's wooden power pole asset management systems, policies and practices following its release of the 2008 Audit in May 2009. On 29 September 2009, EnergySafety issued Western Power with an Order, under s18B of the *Energy Coordination Act 1994*. That section provides as follows:

***18B. Orders as to unsafe work practices in relation to electricity or gas***

- (1) If an inspector is of the opinion on reasonable grounds that any work practice related to safety used in, or in relation to, the construction, repair, maintenance or operation of any thing the inspector is authorised to inspect may give rise to any danger from electricity or gas or does not conform with any Act to which the inspector's powers extend the inspector may make an order under subsection (2).*
- (2) The inspector may, by order in writing, require the person appearing to be responsible for the carrying out of the work practice —*
  - (a) to modify that work practice, in such manner, if any, as the order may specify, within a period of not less than 28 days specified in the order; and*
  - (b) meanwhile, to carry out the work practice in accordance with any condition, restriction or limitation specified in the order until the modification required under paragraph (a) has taken effect,*

*or may prohibit the carrying out of the work practice absolutely.*
- (3) An order under subsection (2) is to specify the work practice in question and the reason why it is unsafe or does not comply with the relevant Act.*

- 6.2 EnergySafety's 2009 Inspector's Order was served on Western Power on 29 September 2009. This Order stated the view that, at the date of the 2009 Inspector's Order, Western Power:

1. *Has not developed and implemented pole inspection practices and serviceability criteria that comply with Regulation 10(2)(b) in that they do not effectively identify unsafe poles that should be replaced or reinforced;*
2. *Has not developed and implemented plans to replace the wood poles in its distribution network to comply with Regulation 10(2)(b) and sufficient to:*
  - a. *Provide for the safety of persons, including employees and contractors to Western Power to comply with Regulation 10(1)(a); and*
  - b. *Avoid or minimise any damage to property, inconvenience or other detriment as a result of the prescribed pole replacement activity to comply with Regulation 10(1)(c);*
3. *Lacks a wood pole replacement plan and management systems to comply with Regulations 10(2)(b) and that the absence of such plans and systems results in pole failures that endanger employees, the public and property; and*
4. *Has not ensured that the design, engineering and operation of its network are regularly reviewed for safety and effectiveness to comply with Regulation 10(2)(e) and that the absence of this review for safety and effectiveness endangers employees, the public and property.*

6.3 The Committee notes that EnergySafety provided reasons for the above views in the 2009 Inspector's Order, as is required at *Energy Coordination Act 1994* s18B. These reasons, and the remedial action required from Western Power, are considered in the following paragraphs.

#### **Wooden Power Pole Line and Reinforcement Findings**

6.4 The Committee notes that EnergySafety's 2009 Inspector's Order expressed the views extracted below:

*"An estimated 310,000 untreated jarrah poles were installed from the end of WWII until the late 1970s ..."*

- *For poles to be safe and remain in service their strength must exceed the stresses caused by the forces applied to them. The ratio between the pole strength and the stresses within the pole is the factor of safety. The design forces used in the pole and line designs, the allowable stress and the factors of safety are specified in the HB C(b)1.*<sup>226</sup>
- *The wood poles in the distribution network are in almost equal parts untreated jarrah and treated species. An estimated 310,000 untreated jarrah poles were installed from the end of WWII until the late 1970s, when diminishing supplies of suitable poles prompted the use of more plentiful treated poles with smaller diameters.*<sup>227</sup>
- *The untreated jarrah poles are all between 30 and 65 years old.*<sup>228</sup>
- *The service life of untreated jarrah poles is specified in AS1720.2 and AS2209 to be 15 to 25 years in ground, and 15 to 40 years above ground.*<sup>229</sup>
- *All the untreated jarrah poles in Western Power's distribution network are older than the 15 to 25 years for jarrah poles in ground. Many are older than the 40 year service life for jarrah poles above ground, which is the prudent service life for reinforced untreated jarrah poles.*<sup>230</sup>

6.5 The Committee finds that EnergySafety was justified in forming its opinion with respect to each of the above matters. This raises the question why, at the time of the 2009 Inspector's Order on 29 September 2009, Western Power was still not replacing its network wooden power poles at rates described by EnergySafety in 2006 as "credible".

*The Committee finds that EnergySafety was justified in forming its opinion with respect to each of the above matters.*

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<sup>226</sup> Department of Commerce, EnergySafety, (2009) [\*Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009\*](#), 29 September, 2009, p4.

<sup>227</sup> *Ibid*, p5.

<sup>228</sup> *Id.*

<sup>229</sup> *Id.*

<sup>230</sup> *Id.*

- 6.6 The Committee accepts that it may be reasonable, in specific circumstances, for a network operator to adopt a wooden power pole replacement and reinforcement strategy that does not comply with relevant industry standards. However, such a strategy could only be justified on the basis of asset management systems, and asset condition knowledge, that Western Power has failed to demonstrate that it could have possessed at the time of EnergySafety's 2009 Inspector's Order.

### Wooden Power Pole Failure Rates

- 6.7 The Committee notes EnergySafety's observation from its 2008 Audit document that, at that time, there were "*key differences between Western Power's current practice, and those used by [Queensland's] Ergon Energy, which also uses sound-dig-and-drill, but achieves wood pole failure rates 20 times less than Western Power's.*"<sup>231</sup> EnergySafety's 2009 Inspector's Order stated that:

- *The [2008 Audit] found that 1 of 6 failed poles investigated did not have the strength to meet the required design standards when installed, but that 5 of 6 did not have the necessary strength to meet the more recent HB C(b)1 - 1991 and 1999 design standards.*<sup>232</sup>
- *The allowable bending stress was reduced from approximately 100 MPa to 50 MPa over the 30 years from the 1960s to 1991. This reduction of the pole design strength recognises the reduced serviceability and safety of the untreated jarrah poles in Western Power's rural network based on industry experience with these poles.*<sup>233</sup>

"Some very old poles installed by local councils before World War II may still be in service in the distribution network."

- *Tests results of clear samples from a 35 year old untreated jarrah pole that failed in 2008 showed the reduction in the allowable design bending strength to 50 MPa to be necessary and prudent. The unseasoned samples in the critical failures zone below ground all failed at approximately 57 MPa. Most of the seasoned*

<sup>231</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p31.

<sup>232</sup> Department of Commerce, EnergySafety, (2009) [Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009](#), 29 September 2009, p5.

<sup>233</sup> *Id.*

*samples from above ground failed at ~90 MPa, except for two samples that failed at less than 40 MPa. These results reflect the variability expected in the wood fibre strength in old poles and the need for caution when assessing the strength of such poles.*<sup>234</sup>

- 6.8 The Committee finds that EnergySafety's view, that caution should be exercised when making decisions about older, untreated jarrah power poles, appears to have been warranted.

#### *Pole Replacement Rates*

- 6.9 The 2009 Inspector's Order expressed the related findings that:

- *Western Power's below-ground inspection practices and good-wood serviceability criterion permit unsafe poles to remain in service.*<sup>235</sup>
- *Western Power manages some 620,000 wood poles in its distribution network. Almost all of these poles were installed by the State Electricity Commission, the State Energy Commission of WA and most recently Western Power in the period since World War II. Some very old poles installed by local councils before World War II may still be in service in the distribution network.*<sup>236</sup>

*"Western Power's below-ground inspection practices and good-wood serviceability criterion permit unsafe poles to remain in service."*

- *The [2006 Audit] found pole replacements were less than 1700 in that year.*<sup>237</sup>
- *The [2008 Audit] found pole replacements had increased to less than 5,000 poles per year.*<sup>238</sup>

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<sup>234</sup> *Id.*

<sup>235</sup> *Ibid*, p4.

<sup>236</sup> *Id.*

<sup>237</sup> *Id.*

<sup>238</sup> *Id.*



- *The [2008 Audit] also found Western Power has plans, subject to financial approval, to replace approximately 11,300 poles per year over the next three years. This is more than the unsafe poles identified from its pole inspection activities, but still less than is necessary to address the safety risks of the aging untreated jarrah poles in the distribution network.*<sup>239</sup>

6.10 It will be recalled from paragraph 5.22 above, that EnergySafety's 2008 Audit contained the following observation in connection with wooden power pole replacement rates:<sup>240</sup>

*Balancing economic life against reliability and safety risks requires data Western Power does not have but should collect.*

*In the short run, while the necessary data are gathered and analysed, the prudent path is to use the best information available and err on the side of caution.*

6.11 A recent response to questions on notice received by the Committee from Western Power reveals that actual wooden power pole replacements in each of the financial years 2008/2009, 2009/2010 and 2010/2011 were 9,409, 10,608 and 12,417, respectively.<sup>241</sup>

*In the short run, while the necessary data are gathered and analysed, the prudent path is to use the best information available and err on the side of caution.*

6.12 The Committee notes that the following disclosures, taken from Western Power's Annual Report for 2009-2010 represent the totality of disclosures in the non-financial section of that document relevant to wooden power poles:

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<sup>239</sup> *Id.*

<sup>240</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#), May 2009, p47.

<sup>241</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "Response to Questions on Notice". 5 December 2011, p16.

**“CHALLENGES**

...

7. *An ageing network with 30 per cent of the network more than 40 years old”<sup>242</sup>*

And:

**“MAJOR PROJECTS DELIVERY**

*The third year of our four-year \$3.5 billion capital investment program, our largest ever work program, was completed in June 2010. A total of \$1006.3 million was invested in upgrading and expanding the network. Of our major projects, 99.2 per cent were delivered on or ahead of schedule and 100 per cent delivered within agreed budgets. A major highlight was reaching the 2009/10 pole replacement target, replacing 10,600 poles. The distribution wood pole inspection backlog has been reduced over the year from 14,354 poles to 1,572 poles at 30 June 2010.”<sup>243</sup>*

*The Committee is particularly struck by Western Power’s assertion at page 15 of its 2009/2010 Annual Report that it had “a comprehensive Pole Replacement Program.”*

And:

**“OPERATING AND IMPROVING THE NETWORK**

**APPROVED WORKS PROGRAM:**

→ *184,924 poles inspected*

→ *10,608 poles replaced*

...

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<sup>242</sup> Western Power, [Annual Report 2009/10](#) August 2010, p7.

<sup>243</sup> *Ibid*, p12.

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## **APPROVED WORKS PROGRAM (AWP)**

*... In 2009/10 the AWP consisted of more than 1,000 projects, with priority given to those on the major projects list. Major projects include ... a comprehensive Pole Replacement Program”<sup>244</sup>*

And:

## **POLE REPLACEMENT PROGRAM**

### ***The challenge***

*More than 30 per cent of Western Power’s network is more than 40 years old. The network includes 630,000 wooden poles that must be inspected and maintained to ensure public safety and reliability of supply. Regular inspection and cleaning is essential to help prevent pole-top fires, caused by the build up of dust and debris on top of wooden poles.*

### ***The solution***

*Western Power has continued with the successful new bundling works program, whereby several jobs in a region are bundled and allocated to one contractor. Previously, pole upgrades were charged separately to replacement costs. These charges are now included in the total cost, meaning more work at a similar price. This approach has enabled high volumes of work to be completed with significant time and cost savings realised.*

### ***The result***

*A record 10,608 poles were replaced throughout the network at a cost of \$59.5 million. The number of pole top fires was 30 per cent below the predicted target, despite an exceptionally long summer dry spell. Against a target of 170,000, the wood pole inspection program achieved 184,924 inspections. The pole inspection backlog has also been reduced from 14,354 to 1,572 poles<sup>245</sup>*

*“Western Power does not have a management system that ensures unserviceable poles are replaced or reinforced.”*

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<sup>244</sup> *Ibid*, p15.

<sup>245</sup> *Ibid*, p17.

- 6.13 The Committee has formed the view that the overall impression created by the various disclosures in Western Power's 2009/2010 Annual Report was that Western Power had "*the Solution*" to its wooden power pole replacement "*Challenge*", and Western Power could point to "*the Results*" in support of this claim. The Committee is particularly struck by Western Power's assertion at page 15 of its 2009/2010 Annual Report that it had "*a comprehensive Pole Replacement Program*." It may therefore, have been reasonable for a reader of such statements to believe that EnergySafety's 29 September 2009 Inspectors Order was being comprehensively addressed, as far as wooden power pole replacements were concerned.

#### *Wooden Power Pole Asset Management Systems*

- 6.14 The Committee notes with concern the assertion by EnergySafety in its 2009 Inspector's Order that:<sup>246</sup>

- *Western Power does not have a management system that ensures unserviceable poles are replaced or reinforced.*

- 6.15 On the basis of the foregoing summary of the findings of its investigations on this matter over a four-year period commencing in 2005, EnergySafety, in its 2009 Inspector's Order required Western Power to develop and document a detailed "*Wood Pole Management Plan*" by 31 January 2010.<sup>247</sup>

*"Unrealistic inspection records and strength assessments can result in unsafe poles remaining in service."*

#### **Wooden Power Pole Inspections**

- 6.16 The Committee notes the following observations by EnergySafety in its 2009 Inspectors Order relevant to wooden power pole inspections:

- *"Unrealistic inspection records and strength assessments can result in unsafe poles remaining in service."*<sup>248</sup>
- *"Western Power's pole inspection practice is set down in its April 2003 Network Pole Inspection Manual and the June 2008 revision of this Manual. The 2008 revision did not*

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<sup>246</sup> Department of Commerce, EnergySafety, (2009) [\*Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009\*](#), 29 September, 2009, p4.

<sup>247</sup> *Ibid*, p8.

<sup>248</sup> *Ibid*, p4.

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*address the below-ground inspection and serviceability criteria issues identified in the [2006 Audit].”<sup>249</sup>*

- *“Western Power’s sound, dig and drill practice for pole inspection is intended to identify the internal rot and remaining good wood from above and below ground inspection holes drilled into the pole for this purpose. The internal good wood measurements from these test holes are the basis of the serviceability criteria used to decide which poles should be replaced, reinforced, or remain in service for a further four years. The 2006 field check of a sample of recently inspected poles at that time found none of these poles had been inspected below ground and the below ground good wood records in Western Power’s maintenance records were not based on below ground good-wood readings from these poles. This check of recently inspected poles was repeated in 2008 and while some progress had been made with quality assurance to ensure below ground inspection were being done, many of the poles inspected in the last two years have not benefited from this improved quality assurance. There are also poles encased in brick and concrete paving that has [sic] not been disturbed and have not been inspected below ground.”<sup>250</sup>*

*“Western Power’s inspection records still do not reflect the real condition and strength of the poles in the safety-critical zone below the ground”*

- *“Western Power’s inspection records still do not reflect the real condition and strength of the poles in the safety-critical zone below the ground where the loss of pole strength due to internal and external rot and the bending forces on the pole are greatest.”<sup>251</sup>*

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<sup>249</sup> *Ibid*, p3.

<sup>250</sup> *Id.*

<sup>251</sup> *Id.*

- *“Western Power’s Network Pole Inspection Manual does not call for all poles to be excavated and inspected in the safety-critical zone below the ground line.”<sup>252</sup>*
- *“The poles that are inspected below ground are not excavated around their circumference to identify the full extent of external rot and loss of pole strength. The loss of external wood is more critical to the pole strength and safety than the internal loss of good wood.”<sup>253</sup>*
- *“An assessment of the loss of internal good wood based on just two test holes is unlikely to establish the condition and strength of the poles.”<sup>254</sup>*
- *“Western Power’s good wood serviceability criterion takes no account of the actual mechanical forces on the pole and power lines, the stresses caused by these forces, and the allowable design strengths based on a realistic assessment of the pole condition. This comparison of pole strength and stress is essential to assess the actual factor of safety and serviceability of each pole inspected.”<sup>255</sup>*

*“Western Power’s good wood serviceability criterion takes no account of the actual mechanical forces on the pole and power lines, the stresses caused by these forces and the allowable design strengths based on a realistic assessment of the pole condition.”*

6.17 On the basis of the foregoing summary of its findings from investigations over a four-year period, commencing in 2005, EnergySafety, in the 2009 Inspector’s Order, required Western Power to:

- modify its wooden power pole inspection practice, and implement that modified practice by 31 December 2009;<sup>256</sup>

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<sup>252</sup> *Ibid*, p4.

<sup>253</sup> *Id.*

<sup>254</sup> *Id.*

<sup>255</sup> *Id.*

<sup>256</sup> *Ibid*, p6.

- modify its wooden power pole strength assessment criteria, and implement the criteria to wooden power pole inspections by 31 December 2009;<sup>257</sup>
- adopt an appropriate wooden power pole serviceability criteria by 31 December 2009, and implement the criteria to wooden power pole inspections by 30 June 2010.

### Unassisted Wooden Power Pole Failures in the Rural Network

6.18 The Committee notes the following observations by EnergySafety in its 2009 Inspectors Order relevant to unassisted wooden power pole failures in the rural network:

- *“The [2006 Audit] found a pattern of untreated jarrah pole failures in Western Power’s rural distribution network. A common factor was that all these poles had no lateral support from wires or stays transverse to the power line that would support them against transverse wind forces.”*<sup>258</sup>
- *“The [2006 Audit] also found from Western Power’s investigations of these failures that none of these poles had the strength required to meet the design standards specified in the HB C(b)1 when installed.”*<sup>259</sup>

*“The pattern of rural pole failures identified in 2006 had not been addressed in 2008.”*

- *“The pattern of rural pole failures identified in 2006 had not been addressed in 2008. These failures may be the result of one or more of the following factors:*
  - *The inadequacy of Western Power’s pole inspection practices to identify the condition and strength of its poles.*
  - *The inadequacy of Western Power’s good wood serviceability criterion to identify undersized poles installed because of design errors.*

<sup>257</sup> *Id.*

<sup>258</sup> *Ibid*, p5.

<sup>259</sup> *Id.*

○ *Poles that may have met the older design requirements, but do not meet the current design requirements.*<sup>260</sup>

- *“Some 15,000 untreated jarrah poles were installed each year in the 20 year period from the 1950s to the late 1970s. Many of these were installed in Western Power’s rural distribution network through the rural electrification Contributory Extension Scheme. Pole replacement rates in the order of 15,000 per year focussed on replacing the oldest untreated jarrah poles will not significantly reduce the risk of old jarrah pole failures. Significantly higher rates must be implemented immediately to achieve the safety outcomes required.”*<sup>261</sup>

6.19 On the basis of the foregoing summary of its findings from investigations over a four-year period, EnergySafety, in the 2009 Inspector’s Order, required Western Power to:

- conduct a Technical Engineering Review of rural wooden power pole strengths by 31 December 2009, with validations and assessments scheduled for 31 January 2010 and 31 May 2010;<sup>262</sup> and
- develop and implement a Rural Pole Safety Improvement Plan by 31 January 2010 which aims to replace or reinforce all non compliant rural wooden power poles by 31 December 2015.<sup>263</sup>

*We deal with all the major network operators, electrical and gas. We only have that issue with Western Power.”*

6.20 When this Committee questioned EnergySafety, at a hearing on Wednesday, 21 September 2011, about its experience in dealings with Western Power from a regulator’s perspective the following exchange occurred:<sup>264</sup>

**Mr Bowron:** *I guess that we have not always felt that all the information has been as forthcoming as it should, or as thorough as it*

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<sup>260</sup> *Ibid*, p6.

<sup>261</sup> *Id.*

<sup>262</sup> *Ibid*, p9.

<sup>263</sup> *Ibid*, p10.

<sup>264</sup> Mr Ken Bowron, Executive Director, and Mr Michael Bunko, Acting Director, Electricity Compliance, EnergySafety, *Transcript of Evidence*, 21 September 2011, pp12-13.



*should. Whether that is from a philosophy of obstruction or inability or the data does not exist, we have varying opinions internally about that.*

**Hon JIM CHOWN:** *But it must be of great concern to your agency as the Office of Energy Safety.*

**Mr Bowron:** *We deal with all the major network operators, electrical and gas. We only have that issue with Western Power.*

**Hon JIM CHOWN:** *So that must be of great concern to you?*

**Mr Bowron:** *A huge concern.*

**Mr Bunko:** *It hinders us because it appears—it is only my opinion—that when we ask for things the immediate response is not to make things discoverable, to get legal advice as to whether they are liable or whether the regulator is going to take action against them.*

**Mr Bowron:** *So protection of the organisation's reputation comes before safety is our concern.*

...

**The CHAIRMAN:** *Can I say that is to your credit. We have to start somewhere, so you have started with 2006 and 2008. The question is: where do you go?*

*"What has been disappointing is the huge amounts of time that it has taken before they have ever responded."*

**Mr Bowron:** *The decision we had to make was: do we call that Western Power has not complied with the order and get into what would obviously be a pretty detailed legal fight? The terms and time of the order has not finished, so whether we can make that call now or we have to wait until the end is also an issue. That would take all our resources to mount that type of case. We believe that Western Power, based on history, would defend it very solidly. It would take their resources. We think it has been better to try to engage with Western Power on the issue and get them to understand the issues and work through it. What has been disappointing is the huge amounts of time that it has taken before they have ever responded. In parallel with that, every opportunity we had of where Western Power has not*

*complied with the law out there, there has been an incident of a pole failure starting a fire alight, we have prosecuted. We are trying to use a bit of carrot and stick with the tools that we have available.*

### Auditor General's Response

*This suggests, inter alia, that the Office of the Auditor General was satisfied, at the standard of the reasonable auditor, that the Board of Western Power was in a position to prudently comply with regulatory and professional standards*

6.21 As for the inaugural 2006 Annual Report, the Committee notes that the Office of the Auditor General for Western Australia expressed an unqualified audit opinion for Western Power in each of the financial years 2006/2007, 2007/2008 and 2008/2009. This suggests, *inter alia*, that the Office of the Auditor General was satisfied, at the standard of the reasonable auditor, that the Board of Western Power was in a position to prudently comply with regulatory and professional standards, including the then content of Australian Accounting Standards Board (AASB) 116: *Property, Plant and Equipment*. The Committee raised this question with the Auditor General at a hearing held on 28 September 2011. The Auditor General assisted the Committee's understanding of this issue with the following insight into the financial audit process:<sup>265</sup>

*In this context each year we review:*

- *... Many poles are already fully depreciated and therefore any re-assessment of their useful life will not affect the financial reporting.*
- *...*
- *Each year we consider whether there was an impairment trigger. In the financial years in question, there were none. An increasing backlog of maintenance does not necessarily represent an impairment trigger.*

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<sup>265</sup> Tabled Document Ref: 28/09/11 from Mr Colin Murphy, Auditor General for Western Australia, tabled 28 September 2011, p2.

- *We sight a sample of property, plant and equipment for existence and for condition.*
- *We perform tests on additions, disposals and review of depreciation policy.*
- *Audit staff meet with management and those charged with governance.*
- *We obtain a management representation letter which includes content regarding property, plant and equipment.*

6.22 Questions about the issue of accounting treatment for assets and how these relate to both economic considerations and safety requirements were put to the Auditor General. In response to these questions the Auditor General advised as follows:<sup>266</sup>

*The pole replacement program is a condition based maintenance program. The condition will determine whether the pole can remain in service or needs to be replaced. Age alone will not determine depreciation rate. Other variables will need to be considered such as general location, wear and tear, environment around the pole. The pole inspection program will seek to provide assurance as to the safety of the public and the replacement but not directly the depreciation rate. If the wooden poles are assessed as safe and in good working condition then regardless of age they need not be replaced. This would be a favourable situation for the State.*

6.23 Acceptance, without question or comment, on the part of the Auditor General, of the accounting treatments adopted by Western Power over the past five years strongly suggests that the Auditor General was sufficiently satisfied that Western Power's wooden power poles had been adequately "assessed as safe and in good working condition" and that "regardless of age they need not be replaced." The Committee notes that such observations do not sit comfortably with the findings of both EnergySafety's and ERA's audits and reviews, both of which suggested that Western Power's "pole replacement program" for the period 2006-2009 amounted to little more than replacing those wooden power poles that either fell over, or were condemned.

*The Committee is of the view that the Office of the Auditor General's obligations have been discharged, in this instance, in a less than satisfactory manner.*

<sup>266</sup>

*Ibid*, p3.

- 6.24 The inconsistencies, revealed in both publicly available reports, and internal Western Power publications, and which are highlighted in the preceding paragraphs are concerning. These concerns persist as at the printing of this Report, and they should have been equally concerning when they were made. The Committee has formed the view that, given the troubling findings of *EnergySafety* in its 2006 and 2008 Audits, together with those of the ERA's reviewer, and the consistent adverse findings of the ERA itself about Western Power's wooden power pole management systems over a period of years, the Auditor General should have been put to inquiry about the possible inadequacy of those internal controls and asset management systems on which his audit opinions since 2009 have been based.
- 6.25 The responsibility of the Auditor General to the Parliament as both the financial auditor, and performance auditor of Western Power, together with the Auditor General's role as a statutory officer of the Parliament places an obligation on the Office to act on deficiencies such as those identified in this Report, and to report to the Parliament accordingly. The Committee is of the view that the Office of the Auditor General's obligations have been discharged, in this instance, in a less than satisfactory manner.

## 7 DEVELOPMENTS SUBSEQUENT TO ENERGYSAFETY'S 2009 INSPECTOR'S ORDER & ERA'S 2009 NOTICE OF COMPLIANCE FAILURE

*The Committee notes that reference to Western Powers Annual Reports from 2006 to 2009 reveals that the Managing Director personally received monetary performance bonuses totalling in excess of \$280,000 over this period. The same sources reveal that Western Power's senior executive management team shared in excess of \$1.73 million in monetary performance bonuses. (Para 8.45 below)*

### ERA's Western Power AA2 Decision

7.1 The Committee notes that, on 4 December 2009 the ERA published its "*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power*" (**ERA's Western Power AA2 Decision**).<sup>267</sup> The following passage from ERA's Western Power AA2 Decision relates to Western Power's resource utilisation, including particular reference to its asset management practices, and is therefore of direct relevance to this inquiry (see also paragraph 5.115 above):<sup>268</sup>

*471. Adding to the context of a trend of increasing costs for Western Power and a lack of information to determine whether these costs meet the relevant tests under the Access Code, information from a range of sources indicate substantial deficiencies in Western Power's management and governance processes as they relate to the undertaking and costs of operating and capital activities. Of particular concern to the Authority has been information to indicate the following:*

- A failure of Western Power to maintain processes and documentation to sustain rigorous and accurate*

<sup>267</sup> Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009. The Committee notes that ERA's Western Power AA2 Decision was subject to some further amendment after this date, but the elements of this decision which are relevant to this inquiry are substantially unchanged.

<sup>268</sup> *Ibid*, p127 (footnotes omitted).

*assessments of capital projects and programs against the requirements of the new facilities investment test.*

- *Deficiencies of planning and design processes that create potential for inefficient engineering of capital projects.*
- *Systematic shortcomings in governance processes for major works, particularly during the course of much of the first access arrangement period, including:*
  - *poor internal cost estimating processes;*
  - *a possibility that Western Power sometimes specifies requirements for equipment over and above industry standards and norms, potentially limiting competition amongst potential suppliers;*
  - *evidence of overcharging of Western Power by contractors, enabled by poor contractual arrangements and limited reconciliation of purchase orders, quotations and invoices; and*
  - *excessive contingency provisions in project budgets.*
- *A lack of quality control for works undertaken by contractors, and instances of contractors failing to undertake works in accordance with specifications, notably in the case of inspection of wood poles.*

... the ERA decided to withhold \$261 million in funding from Western Power over the life of its AA2 Access arrangement period; July 2009 to June 2012 ...

472. *There is also evidence of deficiencies in the management of network assets and operations that may give rise to inefficiencies in capital works and operating and maintenance activities. This evidence includes the following:*

- *Western Power's contraventions of its transmission (ETL2) and distribution (EDL1) licences. Contraventions relate, in part, to deficiencies of Western Power's asset management system, including:*

- *a lack of understanding of key processes for operational and capital work programs; and*
- *poor documentation of the condition of the distribution system leading to reactive and imprecise systems for maintenance activities.*
- *Confidential information obtained by the Authority relating to Western Power’s budgeting of capital and operating activities.*

7.2 On the basis of the “*substantial deficiencies in Western Power’s management and governance processes as they relate to the undertaking and costs of operating and capital activities*” that were referred to by the ERA in the above extract, the ERA decided to withhold \$261 million in funding from Western Power over the life of its AA2 Access arrangement period: July 2009 to June 2012 under the “*new facilities investment test*”. When this point was put to Western Power in a question given on notice, Western Power drew the Committee’s attention to paragraph 743 of the ERA’s Western Power AA2 Decision, which points out that the ERA’s initial assessment of the inefficiencies it had identified in the above processes was initially much larger. In effect, the financial penalty imposed on Western Power by the ERA could have been even greater than the \$261 million that was finally settled by the ERA.<sup>269</sup> This was a point that the Committee had been content to leave unstated, however, at Western Power’s suggestion, it has been made explicit in this Report.

*In effect, the financial penalty imposed on Western Power by the ERA could have been even greater than the \$261 million that was finally settled by the ERA.*

7.3 This approach on the part of the ERA was contested by Treasury, on the basis that accurate expenditure forecasting was not possible for Western Power, due to business uncertainty faced by electricity utilities.<sup>270</sup> ERA’s position appears to have been that Western Power’s expenditure over-runs were more attributable to Western Power’s own internal “*shortcomings*”, “*failures*”, “*deficiencies*” “*lack of quality control*”, “*contraventions*”, “*lack of understanding*” and “*poor documentation*”, than to any industry wide business uncertainty.

7.4 The Committee accepts ERA’s position that this was a strong a regulatory signal that Western Power was unable to mount a sufficiently well justified business case for the

<sup>269</sup> *Ibid*, p200.

<sup>270</sup> *Ibid*, p128.

funding that it was seeking. Western Power's inability to articulate its business case to the satisfaction of the ERA appears to have been, at least in part, due to a demonstrated lack of knowledge of the actual condition of its major distribution asset base, namely, wooden power poles.

### **Western Power's 2010 Asset Management Report**

- 7.5 In April 2010, Western Power's "*Asset Management System - the ERA Assessment Report*" (2010 Asset Management Report)<sup>271</sup> was completed by Lloyds Register and submitted by Western Power to the ERA. Of relevance to the Committee's inquiries, the 2010 Asset Management Report made the following summary findings:<sup>272</sup>

#### ***Auditors Opinion:***

*A review was undertaken of Western Power actions against the 2008 Energy Safety report on Distribution Wood Poles and subsequent order dated 29 September 2009. It is evident that Western Power was not undertaking pole inspections in line with Australian industry best practice. However Western Power were also measuring unassisted pole failures using a different methodology to other utilities and this showed as a poorer performance for Western Power. Western Power has been issued with an order requiring corrective actions to be taken and at the time of this audit those corrective actions were on target.*

*... it appears to the Committee that Western Power's "new methodologies to more accurately establish age profiles for their assets" referred to by the reviewer, amounted to little more than desktop data manipulation.*

- 7.6 The Committee notes that Western Power's 2010 Asset Management Report indicates that, while Western Power had made improvements in its "*Asset planning*"; "*Asset disposal*"; and, "*Capital expenditure planning*", Western Power's consultant reviewer expressed the view that measurable deterioration had occurred in the previous 18-month period with respect to "*Risk management*"; and, "*Contingency planning*". The reviewer also found that:<sup>273</sup>

*... there was a mismatch of average age information between the DAMP [Distribution Asset Management Plan] and the State of the*

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<sup>271</sup> Western Power (2010) [\*Asset Management System - the ERA Assessment Report\*](#). Lloyds Register. 1 April 2010.

<sup>272</sup> *Ibid*, p86.

<sup>273</sup> *Ibid*, p14.



*Network report. For example the State of the Network report states that the average age of wood poles is 17 years whereas the DAMP states 32 years for the same asset. ... The variance in the average age profile was explained in that Western Power have introduced new methodologies to more accurately establish age profiles for their assets.*

- 7.7 Despite this finding, the reviewer rated the relevant “*Asset Planning*” risk controls as “*Adequate*”.<sup>274</sup> The Committee notes that the “*DAMP*” document referred to in the extract above, is the same document referred to in connection with EnergySafety’s 2008 Audit and discussed at paragraph 5.40 above. Given the admissions contained within Western Power’s *DAMP* document, at section “5.3 *Asset Information Allocation*”,<sup>275</sup> it appears to the Committee that Western Power’s “*new methodologies to more accurately establish age profiles for their assets*” referred to by the reviewer, amounted to little more than desktop data manipulation. The basis on which the recorded DFMS data was averaged for this purpose was; “*network length data*” drawn from “*Annual Reports*” using a nominal standard “*9.4 HV poles/km on average*”.<sup>276</sup> The Committee notes that this process appears to have involved using one data artefact to analyse another data artefact, by reference to an arbitrary average. Both the assumptions on which such a methodology are based, and the utility of the product of such a calculation for practice, are equally open to adverse commentary. This fact was raised in evidence before this Committee with both the ERA and Western Power.<sup>277</sup>

*The Committee notes that this process appears to have involved using one data artefact to analyse another data artefact, by reference to an arbitrary average.*

**The CHAIRMAN:** *Let us move on. ...*

*The committee notes that in paragraph 3 Western Power’s distribution asset management plan for 2009–10 is based on an average number of poles across a derived network length record from unspecified annual reports. How can such an abstract assumption–*

<sup>274</sup> *Id.*

<sup>275</sup> Western Power (2009) *Distribution Asset Management Plan for 2009/10*. (DM#3273896) 1 October 2009, p30.

<sup>276</sup> *Id.*

<sup>277</sup> Mr Lyndon Rowe, Chairman, Economic Regulation Authority, *Transcript of Evidence*, 7 November 2011, p23.

*based asset management plan relate to actual individual wooden power poles in rural and remote parts of Western Australia?*

**Mr Rowe:** *I agree.*

**The CHAIRMAN:** *The next lot of questions are obvious. Can you show us where an actual rural wooden pole is located? The answer is pretty obvious, so I will not ask you to answer that. Is there in fact an average kilometre of SWIS network? Where do we go and find that? Is this the quality of the asset management system data that Western Power should have after six years after disaggregation?*

**Mr Rowe:** *Obviously, we would wish it would be in much better shape, because if it was it would certainly make our assessment on whether or not they need to spend the money they are asking for in access arrangement 3.*

*The Committee believes it is a further example of Western Power's cavalier corporate attitude to regulatory oversight.*

- 7.8 In October 2011, this Committee asked for, and was provided by Western Power what the Committee was then led to believe was Western Power's most current 'Distribution Asset Management Plan'. It was on the basis of this document that the Committee formed its questions to both the ERA and Western Power. The Committee was aware that this document was undergoing a review process, but an undertaking was given to the Committee that Western Power would provide the latest version, should the version provided become superseded. It was, therefore, of some concern to this Committee that, when questions were addressed to Western Power on the basis of this documentation at a public hearing, the answers given were premised on the information being out of date. This discourtesy to a Parliamentary committee is not a mere trifle. This issue will be considered further in a later report. The Committee believes it is a further example of Western Power's cavalier corporate attitude to regulatory oversight. The exchange that occurred in evidence before this Committee included the following passage:<sup>278</sup>

**The CHAIRMAN:** *Can you tell us whether there is such a thing as an average power pole, and can you show the committee exactly where it is located?*

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<sup>278</sup> Mr Mark de Laeter, General Manager, Networks, Western Power, *Transcript of Evidence*, 21 November, p17.

**Mr de Laeter:** *No, that is a conceptual idea. What we do is inspect every asset, every pole, and our database contains attributes of every pole. The concept of an average pole can be taken out of context; we deal with each pole, and the condition of each pole, on its merit.*

**The CHAIRMAN:** *What about the network? You talk about an average kilometre of SWIS network. Can you please advise the committee where that average kilometre is?*

**Mr de Laeter:** *It is a concept. It is just there as a guide to help understand certain attributes and characteristics of the network. I repeat: we have now inspected every pole at least once, so there is no backlog. We are up to date with every inspection at the functional level, which Mr Aberle described at the last hearing. Our databases are being continually refined and we deal with the condition of each pole and then work out a treatment plan for each pole and, in aggregate, the funding and resources that we need to treat those poles.*

*Even relying on the last resort of pure wooden power pole age and reinforcement status is made highly problematical for Western Power, given that it does not know the installation date of the oldest third, to one half, of its wooden power poles.*

- 7.9 The Committee is left to ponder the concession in the preceding extract of evidence that the most recent ‘Distribution Asset Management Plan’ that was provided to it by Western Power is based on “*concepts*”. What such concepts reveal about the actual condition of actual wooden power poles is unclear. With respect to the cycles of inspections making the database more reliable, the Committee is left to ponder the value of the information that is actually being gathered by such inspections, when EnergySafety remains unsatisfied that the inspection methodology and serviceability index being applied does not provide a reliable measure of wooden power pole serviceability. Even relying on the last resort of pure wooden power pole age and reinforcement status is made highly problematical for Western Power, given that it does not know the installation date of the oldest third, to one half, of its wooden power poles.

- 7.10 Further, the Committee notes the following extract from EnergySafety's 2006 Audit relating to the average age of the wooden power pole asset base:<sup>279</sup>

*There are numerous references in the Western Power documents supplied for the 2005 audit that report the wood pole population to be in the order of 800,000 poles. This figure would include the ~25,000 poles that are now in the Horizon Power network and suggest the wood pole population in what are now Western Power's networks to be ~775,000*

*None of this data provides any information about the age distribution and average age of the wood poles in Western Power's networks.*

*A copy of a Western Power hand written document also provided for the 2005 audit lists the additional poles installed per year from 1952 to 1991. ...*

*An estimate of the age profile based on this hand written document puts the average age of the poles in the networks in the order of 32 to 33 years.*

*... the Committee is uncertain how the relevant asset management system reviewer could reasonably assess Western Power's wooden power pole age distribution "methodology" as being able to "more accurately establish age profiles for their assets".*

- 7.11 Against this background, the Committee is uncertain how the relevant asset management system reviewer could reasonably assess Western Power's wooden power pole age distribution "methodology" as being able to "more accurately establish age profiles for their assets".<sup>280</sup> The same flawed data set was relied upon, in part, by the reviewer to support an "Adequate" rating of Western Power's "Asset Register" sub-category of its "Asset Operations" systems.<sup>281</sup> This reliance by the reviewer is not qualified in Western Power's 2010 Asset Management Report by reference to any relevant adverse regulatory findings (for example, 2008 Audit, see

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<sup>279</sup> Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p23.

<sup>280</sup> Western Power (2010) [\*Asset Management System - the ERA Assessment Report\*](#). Lloyds Register. 1 April 2010, p14.

<sup>281</sup> *Ibid*, p23.

paragraphs 5.1 and 7.1 above), nor does the audit evidence on which the statement was made include reference to the relevant documents.<sup>282</sup>

- 7.12 The Committee also notes that Western Power’s 2010 Asset Management Report assessed Western Power’s “*Asset Disposal*” systems. The Committee notes that the reviewer assessed this process as “*Adequate*” and made the following comments at the sub-category headed “*There is a replacement strategy for assets*”:<sup>283</sup>

*Replacement strategies are available for all asset types in transmission and distribution. These are detailed in the Transmission Asset Management Plan, TAMP, and the Distribution Asset Management Plan, DAMP. Information on condition of transmission assets is held in the Transmission Investment Planning Database (TIPD) and for distribution assets in the Distribution Asset Management Planning database.*

- 7.13 The Committee notes that these review findings do not sit comfortably with the findings of EnergySafety’s 2008 Audit (see paragraph 5.1 above), or with those of the ERA in its Western Power AA2 Decision extracted at paragraph 7.1 above. The Committee further notes that, at this point in the review document, no reference was made by the reviewer to relevant aspects of either EnergySafety’s 2009 Inspectors’ Order, or the ERA’s 2009 Notice of Compliance Failure. None of the documents identified by the Committee in this paragraph are referred to in the evidence relied upon by the reviewer in making the above comments.<sup>284</sup>

*This, together with the reviewer’s reliance on the flawed DAMP document, raises questions about the validity of the “Adequate” ratings awarded at this part of both Western Power’s 2008 and 2010 Asset Management Reports.*

- 7.14 The Committee notes that Western Power’s 2010 Asset Management Report does refer directly, if cryptically, to both EnergySafety’s 2008 Audit and the 2009 Inspectors’ Order under the “*Asset Maintenance*” system review. The reviewer made the following comments at the sub-category dealing with “*Maintenance policies*”:<sup>285</sup>

*Maintenance policies and procedures are documented and, since the previous audit, have been reviewed. Maintenance regimes are time*

<sup>282</sup> *Ibid*, p91.

<sup>283</sup> *Ibid*, p19.

<sup>284</sup> *Ibid*, p90.

<sup>285</sup> *Ibid*, p18.

*based dependent on the type and make of asset. The Distribution Asset Management Plan (DAMP) covers all run to failure and non run to failure asset classes. The DAMP also includes asset life and asset condition analysis. An audit had been conducted by Energy Safety on wood pole maintenance which indicated that Western Power was not undertaking wood pole inspections in line with Australian electricity industry best practice. This was demonstrated by Western Power's performance in unassisted wood pole failures being worst in class and had resulted in Energy Safety issuing an Order to Western Power. In investigating this, the Auditor noted that there is no formal process within Western Power to capture where maintenance policies and procedures are not aligned with industry.*

- 7.15 The Committee again notes the reliance placed by the reviewer on Western Power's DAMP document in reaching the conclusion that the risk controls were "Adequate". This is the same assessment that had been made in Western Power's 2008 Asset Management Report review by the same reviewer. The significant point of difference raised by EnergySafety, in its 2008 Audit document with the findings of the reviewer in Western Power's 2008 Asset Management Report is neither referred to, nor addressed, in the relevant portion of Western Power's 2010 Asset Management Report. This point of difference is discussed in more detail at paragraph 5.57 above. The Committee believes that this was a significant omission from Western Power's 2010 Asset Management Report. This, together with the reviewer's reliance on the flawed DAMP document, raises questions about the validity of the "Adequate" ratings awarded at this part of both Western Power's 2008 and 2010 Asset Management Reports.

*"Internal audit is an internal process for the company concerned; it would never replace an external audit process; the two are quite separate."*

- 7.16 The Committee further notes Western Power's 2010 Asset Management Report, under the heading "Review of AMS". The reviewer made the following comments at the sub-category dealing with "Independent reviews":<sup>286</sup>

*Western Power has an internal audit section which undertakes audits on various parts of the asset management system. Western Power stated that the asset management system will be updated as a result of the management actions undertaken as a result of the findings of this review.*

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<sup>286</sup>

*Ibid*, p41.

- 7.17 The Committee has discussed its concerns about the foregoing matters in paragraphs 4.11 and 5.57 above, regarding this aspect of Western Power's 2008 Asset Management Report which was prepared by the same reviewer. The Committee notes with concern the lack of reference by the reviewer, in its second review, to any "Independent" reviews. The above comments do refer to "an internal audit section", but even if one accepts an internal audit section as being, in the relevant sense, independent of either Western Power, or its consultant reviewer, there is no suggestion in the 2010 Asset Management Report that any such reviews actually took place. Nor is any reference made to such a review in the evidence recorded by the reviewer in connection with these comments in its report.<sup>287</sup> The Committee raised this licence requirement directly with the ERA in evidence as follows:<sup>288</sup>

*The CHAIRMAN: Is the committee correct in understanding this to mean that the licence requirement has been watered down from independent reviews to an internal audit process once these processes were established? Is this really the world-class best practice in licensing?*

*Mr Rowe: No, Chair. There is no way that internal audit replaces the external review. The issue here that I am talking about is if you were running a well-organised organisation and you had a range of what I call type 1 reporting issues, you would give appropriate priority and resources to make sure that you were aware whether those things were happening or not. Internal audit is an internal process for the company concerned; it would never replace an external audit process; the two are quite separate.*

*Western Power may not have had a valid Asset Management System Review since it was disaggregated.*

- 7.18 The foregoing discussion should be read together with the significant flaws that the Committee has identified in Western Power's 2008 and 2010 Asset Management Reports (together with those that are articulated at paragraph 7.124 below with respect to Western Power's 2011 Asset Management Report, prepared for Western Power by GHD Pty Ltd (the **2011 Asset Management Report**)).<sup>289</sup> These flaws, for the most part, appear to have been missed by the ERA. On this basis, the Committee expresses its concern that Western Power may not have had a valid Asset Management System

<sup>287</sup> *Ibid*, p95.

<sup>288</sup> Mr Lyndon Rowe, Chairman, Economic Regulation Authority, *Transcript of Evidence*, 7 November 2011, p19.

<sup>289</sup> Western Power (2011) [Asset Management System Review - Final Report](#). GHD Pty Ltd. October 2011.

Review since it was disaggregated. This in turn raises the question why such a flawed regulatory regime should be permitted to persist.

## 2010 Western Power Licence Report

- 7.19 In the following month of May 2010, Western Power's (2010 Western Power Licence Report was completed.<sup>290</sup> Nowhere in this document does it mention either the EnergySafety 2008 Audit, or the 2009 Inspectors' Order. Similarly, there is no mention in this document, of the ERA 2009 Notice of Compliance Failure. It is, therefore, not apparent to the Committee how the 2010 Western Power Licence Report can be described as a comprehensive performance audit of Western Power over the relevant period.
- 7.20 The 2010 Western Power Licence Report, in a number of places, refers to "*Breach - 2008 Performance Audit*".<sup>291</sup> Reference to the 2008 Western Power Licence Report, which was produced by the same performance auditor, reveals that no breaches were notified in that earlier document. It appears likely, from referring back to the ERA 2009 Notice of Compliance Failure, that the reference to "*Breaches*" in the 2010 Western Power Licence Report is, in fact, a reference to the compliance failures identified in the ERA 2009 Notice of Compliance Failure - without actually referring to the Notice. As a result of its audit process, the 2010 Western Power Licence Report reviewer again gave Western Power's Asset Management System the same "*Compliant with no further action required to maintain compliance*"<sup>292</sup> assessment that it had applied in the 2008 Western Power Licence Report. This is despite Western Power having two open regulatory non-compliance orders in force at the time, both of which were directly relevant to asset management issues.

*Given that these matters were still substantially unresolved as between Western Power and its relevant regulators in May 2010, it is unclear to the Committee to what extent Western Power's Asset management System could reasonably be described as being "Compliant..."*

- 7.21 Of particular interest to the Committee is the nature of the Audit evidence relied upon by the 2010 licence performance reviewer to satisfy itself that Western Power's asset management system substantially complied with Clause 19 of its transmission and distribution licences. No direct reference in this respect is made to either the

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<sup>290</sup> Western Power (2010) [\*Electricity Distribution Licence \(EDL1\) Performance Audit Report\*](#). Ernst & Young, 11 May 2010.

<sup>291</sup> For example, *Ibid*, pp104, 106 & 218.

<sup>292</sup> *Ibid*, pp104 & 218.



EnergySafety 2009 Inspector's Order, or the ERA 2009 Notice of Compliance Failure as relevant documentation. In addition, EnergySafety appears to have been unaware of the existence of Western Power's 2010 Asset Management Report as recently as September 2011.<sup>293</sup> Given that these matters were still substantially unresolved as between Western Power and its relevant regulators in May 2010, it is unclear to the Committee to what extent Western Power's asset management system could reasonably be described as being "*Compliant with no further action required to maintain compliance*" with or without direct reference to the adverse regulatory compliance notices.

- 7.22 The Committee notes that, on 30 June 2010, on the basis of information received until that date from Western Power and its reviewers, the ERA extended its 2009 Notice of Compliance Failure "*until the reports on the audit and review, covering the period 1 November 2009 to 30 April 2011*". As discussed at paragraph 8.75 below, at the date of this Report, Western Power has still failed to comply with the substance of EnergySafety's 2009 Inspector's Order. The apparent unwillingness, or inability, of Western Power to meet its regulatory obligations in a timely fashion is a deeply troubling corporate characteristic that the Committee has observed in Western Power's dealings with a number of its regulators during the life of this inquiry. It has also been in evidence in Western Power's dealings with this Committee.

### ERA's March 2011 Inquiry into the Funding Arrangements of Horizon Power

*"... if Western Power had put to us that it needed to spend more on poles to be consistent with what EnergySafety required to be done, obviously we would have approved that as appropriate expenditure."*

- 7.23 On 18 March 2011, the ERA released its "*Inquiry into the Funding Arrangements of Horizon Power: Final Report*." In part, that report considered a funding proposal by Horizon Power to replace a majority of its Esperance network's wooden power poles (the **ENRUP proposal**).<sup>294</sup> This was on the basis that over 30% of the wooden power poles in Horizon Power's Esperance network were installed before 1970, and these poles represented an unacceptable safety risk. The ERA's final report found that this funding proposal should be supported. The principal reason for the ERA's support was because it was regarded as a high priority expenditure, due to the non-compliance with safety standards and exposure to risk of litigation in the event of a safety

<sup>293</sup> Email message from Mr Michael Bunko, Acting Director, Electricity Compliance, EnergySafety, 24 October 2011.

<sup>294</sup> Economic Regulation Authority (2011) [\*Inquiry into the Funding Arrangements of Horizon Power: Final Report\*](#). 18 March 2011, pp71-71, 76-80, 83 & 85.

incident. This is consistent with the following evidence to this Committee by the ERA at a private hearing in November 2011:

**The CHAIRMAN:** *Why did the ERA not insist that Western Power comply with EnergySafety's repeated requests since 2006 to lift the wooden power pole replacement rate to at least 15 000 per annum as a matter of prudent financial and economic management?*

**Mr Rowe:** *In doing the access arrangement, we operate what I think Robert Pullella described to you last time as the "propos and respond model". The issue of safety and whether safety standards are being met is an issue for the safety regulator.*

**The CHAIRMAN:** *There is an economic component.*

**Mr Rowe:** *In the sense that—if Western Power had put to us that it needed to spend more on poles to be consistent with what EnergySafety required to be done, obviously we would have approved that as appropriate expenditure.*

**The CHAIRMAN:** *And you do not have the responsibility yourself to come to that conclusion?*

**Mr Rowe:** *We rely on EnergySafety to do that role, Chair.*

- 7.24 The Committee is struck by the similarity of the positions faced by both Horizon Power and Western Power in March 2011. Both utilities had networks in which more than 30% of the wooden power poles were installed prior to 1970. The same industry standards apply in both cases. The same regulatory framework applies to both utilities. The condition of the asset base appears to the Committee to be similar. The only apparent difference appears to be one of sheer scale. This point was raised in evidence before the Committee with Western Power as follows:<sup>295</sup>

*The Committee is struck by the similarity of the positions faced by both Horizon Power and Western Power in March 2011.*

**The CHAIRMAN:** *You have advised the committee at the previous hearing that Western Power had been working on its AA3 submission since January 2010. The ERA's Horizon Power funding decision was a matter of public record. Western Power was basically in the same position as Horizon Power, were you not?*

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<sup>295</sup>

Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p10.

**Mr Aberle:** *As Mr de Laeter reminds me, our cycles of responses to the ERA differ, but, yes, as I said —*

**The CHAIRMAN:** *No, we are talking about the physical condition of their assets*

**Mr Aberle:** *Ours is on a very much larger scale. As I said, for many years that has been the state.*

**The CHAIRMAN:** *Is it not true that Western Power's funding requirements for its own unsafe wooden power poles crystallised when the ERA published its Horizon Power funding decision in March 2011?*

**Mr Aberle:** *No, not at all. It is completely unrelated to that. ...*

- 7.25 Contrary to the evidence of Western Power's Managing Director, the Committee is inclined to the view that ERA's findings with respect to Horizon Power's ENRUP proposal were, in fact, directly relevant to the situation facing Western Power. The contrary view, that the two are unrelated, proposed by Western Power's Managing Director in evidence before this Committee, lacks credibility.
- 7.26 Indeed, subsequent to the exchange referred to above, the Committee has obtained relevant Western Power Board papers. These papers clearly indicate that, in early June 2011 Western Power's management was advising the Board of other possible implications for Western Power flowing from the ERA's Horizon Power funding decision in March 2011.<sup>296</sup>

*The view held by the Committee on this point appears to be shared by the ERA.*

- 7.27 The view held by the Committee on this point appears to be shared by the ERA. In evidence before this Committee this proposition was put to the Chair of the ERA as follows:<sup>297</sup>

**The CHAIRMAN:** *Just moving on in the same question. Question "ii." is, "Presumably the concerns relating to wooden power poles identified by Horizon Power also apply to Western Power. In light of ERA's March 2011 reconsidered decision re: Horizon Power's ENRUP project, would it have been reasonable for Western Power to*

<sup>296</sup> Western Power, confidential document, (DM#8288144), p19 of 54.

<sup>297</sup> Mr Lyndon Rowe, Chairman, Economic Regulation Authority, *Transcript of Evidence*, 19 October 2011, p18.

*alert either the ERA or the Parliament of the implications for the Western Power network for example, through the estimates process, or in its 2010–11 annual report?”*

**Mr Rowe:** *You are asking for an opinion. I guess my opinion is probably yes.*

*“... Western Power’s funding requirements for its own unsafe wooden power poles crystallised when the ERA published its Horizon Power funding decision in March 2011 ...”*

- 7.28 Further, if the Committee’s view about this matter is to be preferred, the implications are highly significant. This significance was addressed in the following extract from Western Power’s second public hearing before the Committee:<sup>298</sup>

**The CHAIRMAN:** *In March 2011 it was before the printing of this year’s budget papers; two months before the budget was handed down in Parliament; three months before the annual estimates hearing; and six months before the annual report was signed off and tabled in Parliament. How do you account for the fact that you failed to mention the implications of this state of affairs to the Parliament on all the three subsequent occasions of reporting in the year? You have got the budget, annual estimates and the annual report.*

**Mr Aberle:** *I have been through this. We have actually submitted, as required, on all of those occasions, and the amounts of money built into things like the budget estimates did foresee a significant uplift in investment.*

**Hon ED DERMER:** *Mr Aberle, if I was a senior officer in a government agency and I was concerned about the near future utility of my major asset, I would feel an obligation to include that concern in an annual report. Do you believe that there is a duty with the leadership of an agency to include direct and clear reference to such a concern in its annual report to Parliament?*

**Mr Aberle:** *I have explained what I see the annual report being required to do. My comment is: yes, it is our accountability to make this clear and we have been discharging this since we took over and*

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<sup>298</sup>

Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p10.

*discovered, and amplified the extent of it, back in 2005–06. That has been a consistent message from us and was simply re-articulated as we went into the AA3 submission.*

**Hon ED DERMER:** *Where in the annual report did you make clear your concern for the near future utility of the network of Western Power?*

**Mr Aberle:** *When you say “near future utility” —*

**Hon ED DERMER:** *The statement of 15 September said that the network is approaching the end of its useful life. As an ordinary man I would interpret that as suggesting that some time in the near future the end of the useful life will come. When I asked you: do you believe an agency has a duty to include such a concern in an annual report, I think your initial words were “Yes”. I am asking you: where in the annual report you explained your concern for the ongoing usefulness of the network?*

**Mr Aberle:** *The annual reports, all leading up to 2011, had contained that kind of information. Its emphasis varied, but from our point of view it was well and truly understood —*

**Hon ED DERMER:** *Can you cite for me precisely where it said that in the near future the network would reach the end of its useful life?*

**Mr Aberle:** *It did not say “in the near future it will reach the end of its useful life”. I have explained to you the kind of time frame over which we see the utility eroding. It is something like 20 years.*

**Hon ED DERMER:** *Where in the annual report does it have any comment about the likely future extent of the useful life of the network?*

**Mr Aberle:** *It makes reference to the ageing network, and in the annual reports leading up to it that has been explained. What I will do is take the question on notice. You will not find a specific reference in the terms you seek in that annual report; we have established that. However, it is a matter of public knowledge and one canvassed in Parliament many times.*

**Hon ED DERMER:** *Do you believe there is a duty for the agency to include in its annual report a clear reference to a concern that it holds?*

**Mr Aberle:** *I believe it is the duty of the agency to ensure that the annual report reports on its performance for the year and any sudden shift in state that it might see. We are not talking about a sudden shift in state, we have been working away at this network problem for six years.*

- 7.29 The Committee notes that, prior to March 2011, the ERA had never publicly endorsed the funding of a replacement program for 30% to 50% of an electricity network operator's wooden power poles. This was an entirely new development of direct relevance to the situation Western Power was in at this time. The Committee is therefore firmly of the view, expressed by the Chairman in the extract from the public hearing above, that "*Western Power's funding requirements for its own unsafe wooden power poles crystallised when the ERA published its Horizon Power funding decision in March 2011*".
- 7.30 Given the fact that such a new development had occurred in March 2011, it would have been reasonable to expect some specific mention of the fact, and its implications for Western Power in the Budget papers, in evidence before the Estimates Committee, and in Western Power's Annual Report for 2010/2011.

**Office of Energy's Strategic Energy Initiative, Energy 2031**

*Reference to paragraphs 5.113 and 7.1 above reveal the views of the ERA with respect to Western Power's past regulatory performance from an efficiency perspective. The views of the ERA in this respect are considerably at odds with those expressed to the Office of Energy by Western Power*

- 7.31 The Committee notes the following comments by Western Power in its public submission to the Office of Energy's "*Strategic Energy Initiative, Energy 2031; Directions Paper*" in May 2011:<sup>299</sup>

*Western Power believes a minimalist approach to state government regulation and intervention at this time will increase the likelihood the state energy sector (including the market) will function as efficiently as possible.*

- 7.32 The Committee has reason to question the premise underlying the preceding extract. Reference to paragraphs 5.115 and 7.1 above reveal the views of the ERA with respect

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<sup>299</sup> Western Power (2011) [\*Strategic Energy Initiative; Energy 2031 Directions Paper Submission\*](#). May 2011, p12.

to Western Power's past regulatory performance from an efficiency perspective. The views of the ERA in this respect are considerably at odds with those expressed to the Office of Energy by Western Power extracted in the preceding paragraph.

7.33 Elsewhere in Western Power's submission in response to the *Strategic Energy Initiative, Energy 2031; Directions Paper*, Western Power expressed the view that:<sup>300</sup>

- b. *Undertaking an analysis of the State's network infrastructure to 2030 and 2050 (which is also beyond the temporal scope of the SEI) seems to overlap to some extent with what Western Power already does. We note that some of this work is being completed for Western Power's submission to the ERA in support of our third Access Arrangement (AA3). Western Power also completes similar work for the Transmission and Distribution Annual Planning Report, which makes network predictions within a more meaningful time scale. As this process has demonstrated in the past, network planning situations can (and do) change rapidly, sometimes bringing about major revisions of future plans. While it is acknowledged that long term planning is important, these experiences have accentuated the importance of our annual planning cycles.*

*Western Power suggests that our current planning process is operating well and it is unnecessary to expend additional resources on more detailed planning for the network out to 2030 or 2050.*

- c. *Western Power notes that information relating to future electricity network infrastructure is provided in our Annual Planning Report.*

*"Western Power would welcome a review of the legislation and supports the funding of audit and enforcement of maintenance standards that impact the SWIS."*

7.34 Western Power further expressed the view in the same submission that:<sup>301</sup>

<sup>300</sup> *Ibid*, p16.

<sup>301</sup> *Ibid*, p25.

*As part of Western Power's asset management processes, consideration is made of the maintenance standard requirements and funding is achieved through an annual budget cycle submission.*

*Western Power would welcome a review of the legislation and supports the funding of audit and enforcement of maintenance standards that impact the SWIS.*

- 7.35 The Committee notes that neither Western Power's May 2011 submission to the Office of Energy's *Strategic Energy Initiative, Energy 2031; Directions Paper*,<sup>302</sup> nor its February 2010 submission to the Office of Energy's *Strategic Energy Initiative Issues Paper*<sup>303</sup> made mention of the fact that its distribution network was "*reaching the end of its useful and safe life*".<sup>304</sup> This raises the question why Western Power's belief that the SWIN system "*reaching the end of its useful and safe life*", and requiring an accelerated 20-year program of corrective asset maintenance and replacement, were not matters of significance in the context of the State's strategic energy planning.
- 7.36 Similarly, Western Power's submissions to the Office of Energy made no mention of the ERA's decision to withhold \$261 million in funding from Western Power in AA2<sup>305</sup> because of internal "*shortcomings*", "*failures*", "*deficiencies*" "*lack of quality control*", "*contraventions*", "*lack of understanding*" and "*poor documentation*".<sup>306</sup> Western Power appears to have formed the view that these were not matters of significance to the State's strategic energy future.
- 7.37 The Committee is, however, inclined to endorse the view expressed by Western Power to the Office of Energy in its submissions, and extracted above at paragraph 7.34, that it may be time for "*a review of the legislation and supports the funding of audit and enforcement of maintenance standards that impact the SWIS*", although not to the same end.

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<sup>302</sup> *Ibid.*

<sup>303</sup> *Ibid.* Note that this document does state that; "*We do this by improving the condition and safety of our aging network while addressing community concerns about the construction of new infrastructure.*" *Ibid.*, p5.

<sup>304</sup> Western Power (2011) [Western Power's five year investment plan](#). Media Update. 15 September 2011.

<sup>305</sup> Economic Regulation Authority (2009) [Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power](#). Government of Western Australia. 4 December 2009, p201.

<sup>306</sup> *Ibid.*, p128.



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**State Budget Papers - May 2011**
*Horizon Power*

*“Over the Forward Estimates Horizon Power will invest an additional \$44.8 million in mitigating identified high and extreme risks to ensure it meets statutory and regulatory obligations ...”*

7.38 The Committee notes that Horizon Power’s disclosures in the State Budget Papers for the 2011/2012 estimates period included the following text:<sup>307</sup>

***Asset Management Plan***

*Over the Forward Estimates Horizon Power will invest an additional \$44.8 million in mitigating identified high and extreme risks to ensure it meets statutory and regulatory obligations for its Distribution Systems across regional Western Australia, primarily in Esperance, Broome, Gascoyne, Kununurra, Karratha and Port Hedland.*

...

***Distribution***

...

- *\$31.6 million on the replacement of assets that have reached the end of their economic life;*

...

- *\$33.0 million on safety compliance projects, which includes pole replacement and reinforcements, replacement of overhead connections and addressing other safety issues in regions including Broome, Carnarvon, Esperance and Karratha.*

7.39 The relevant financial detail from Horizon Power’s Budget Papers were as follows:<sup>308</sup>

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<sup>307</sup> Western Australia, 20011-12 Budget: Budget Statements. [Budget Paper No 2, Vol 2](#), p614.

<sup>308</sup> *Ibid*, p615.

	Estimated Total Cost \$'000	Estimated Expenditure to 30-6-11 \$'000	2010-11 Estimated Expenditure \$'000	2011-12 Estimated Expenditure \$'000	2012-13 Forward Estimate \$'000	2013-14 Forward Estimate \$'000	2014-15 Forward Estimate \$'000
<b>WORKS IN PROGRESS</b>							
<b>Asset Management Plan</b>							
Asset Replacement	4,250	2	2	3,008	1,240	-	-
...							
Safety	39,375	8,229	8,229	18,185	12,961	-	-
...							
<b>Distribution</b>							
Asset Replacement	68,796	37,194	15,601	15,475	11,919	664	3,544

7.40 The Committee notes that Horizon Power did not specifically refer to wooden power poles, or the ENRUP proposal in its Budget Papers, but did provide a detailed breakdown of the components of its targeted expenditure relating to “*Asset Replacement*” and “*Safety*”. In addition, the details of its specific investment proposals were already in the public domain and, were accessible on the ERA website. The Committee does, however, note the specific disclosures by Horizon Power, extracted above, that it was:<sup>309</sup>

- “mitigating identified high and extreme risks to ensure it meets statutory and regulatory obligations for its Distribution Systems”;
- engaged in the “replacement of assets that have reached the end of their economic life”; and
- addressing “other safety issues” in its distribution networks.

#### *Western Power*

7.41 The Committee notes that Western Power’s disclosures in the State Budget Papers for the 2011/2012 estimates period included the following text:<sup>310</sup>

#### ***Asset Investment Program***

*Western Power’s 2011-12 asset investment program is focused on improving public safety, the customer connection process, the ability of the network to meet increased customer demand and maintaining network reliability.*

...

<sup>309</sup> Ibid, p614.

<sup>310</sup> Ibid, p618.

**Transmission**

...

*Other transmission asset investment include \$23.0 million in asset replacement with major activities including replacing wood poles, circuit breakers, transformers, current transformers, surge arrestors and relays.*

...

**Distribution**

...

*Asset replacement expenditure of \$115.0 million includes pole and cross arm replacement, substation and transformer replacement, pole reinforcement, as well as replacement of street luminaries and cable boxes. \$82.0 million will be spent on regulatory compliance programs to improve safety, environmental impact, power quality, metering performance and bushfire management.*

...

7.42 The relevant financial detail from Western Power's section of the relevant State Budget Papers was as follows:<sup>311</sup>

	Estimated Total Cost \$'000	Estimated Expenditure to 30-6-11 \$'000	2010-11 Estimated Expenditure \$'000	2011-12 Estimated Expenditure \$'000	2012-13 Forward Estimate \$'000	2013-14 Forward Estimate \$'000	2014-15 Forward Estimate \$'000
<b>WORKS IN PROGRESS</b>							
...							
<b>Distribution</b>							
...							
New Capacity, Asset Replacement and Public Safety	2,513,375	1,187,451	265,817	360,331	316,658	319,667	329,268
...							
<b>Transmission</b>							
...							
New Capacity, Asset Replacement and Public Safety	1,196,977	773,403	99,292	113,887	99,995	100,965	108,727

<sup>311</sup> *Ibid*, p619.

- 7.43 The Committee notes that Western Power's disclosures in the State Budget Papers for the 2011/2012 estimates period also included the following text under the heading "Western Power Provisions":<sup>312</sup>

***Asset Investment Program***

*A provision of \$445.7 million has been made within the State Budget for allocation to a number of Western Power projects and programs of work. ... The remaining provisions represent a 20% reserve of total approved funding for specific programs of work and will be released upon the completion of a pre-New Facilities Investment Test determination conducted by the Economic Regulation Authority.*

...

***Replacement of Overhead Customer Service Connections, Distribution Carriers and Bushfire Mitigation Works***

*This provision relates the delivery of programs designed to address public safety and the implementation of Western Power's bushfire mitigation strategy.*

***Targeted Reliability Works***

*Reliability works relate to the upgrade and augmentation of the network required to maintain performance and reliability of service.*

***Wood Pole Replacement and Reinforcement and Pole Top Replacement***

*Wood pole replacement and reinforcement is structured around a conditions based assessment regime central to the management of wood poles within the distribution overhead network.*

- 7.44 The relevant financial detail from Western Power's section of the relevant State Budget Papers was as follows:<sup>313</sup>

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<sup>312</sup> *Ibid*, p620.

<sup>313</sup> *Id.*

	Estimated Total Cost \$'000	Estimated Expenditure to 30-6-11 \$'000	2010-11 Estimated Expenditure \$'000	2011-12 Estimated Expenditure \$'000	2012-13 Forward Estimate \$'000	2013-14 Forward Estimate \$'000	2014-15 Forward Estimate \$'000
<b>NEW WORKS</b>							
...							
Replacement of Overhead Customer Service Connections Distribution Carriers and Bushfire Mitigation Works	13,600	-	-	13,600	-	-	-
Targeted Reliability Works	5,700	-	-	5,700	-	-	-
Wood Pole Replacement and Reinforcement and Pole Top Replacement	17,400	-	-	17,400	-	-	-
...							

... these disclosures were the most direct of their kind to have been made in Budget Papers since Western Power was reconstituted in 2006 ...

- 7.45 The Committee notes that Western Power did specifically refer to wooden power poles in its State Budget Papers. Specifically, Western Power advised the Parliament that its proposed:<sup>314</sup>

*Wood pole replacement and reinforcement is structured around a conditions based assessment regime central to the management of wood poles within the distribution overhead network.*

- 7.46 In addition, the Committee notes that the State Budget Papers identified that “Western Power’s 2011-12 asset investment program is focused on improving public safety ...” And that Western Power’s “Other transmission asset investment include \$23.0 million in asset replacement with major activities including replacing wood poles,” together with the following statement relating to distribution network expenditure:<sup>315</sup>

*Asset replacement expenditure of \$115.0 million includes pole and cross arm replacement, substation and transformer replacement, pole reinforcement, as well as replacement of street luminaries and cable boxes. \$82.0 million will be spent on regulatory compliance programs to improve safety, environmental impact, power quality, metering performance and bushfire management.*

<sup>314</sup> *Id.*

<sup>315</sup> *Ibid*, p618.

- 7.47 The Committee acknowledges that these disclosures were the most direct of their kind to have been made in Budget Papers since Western Power was reconstituted in 2006, regarding the replacement of network wooden power poles. However, Western Power's disclosures nevertheless appear to the Committee to lack the clarity and candour that is evident in the Horizon Power disclosures.

*... none of the statements by Western Power relating to its network wooden power poles in the Budget Papers approaches the directness of the disclosures made by Horizon Power ...*

- 7.48 The Committee is struck by the fact that none of the statements by Western Power relating to its network wooden power poles in the Budget Papers approaches the directness of the disclosures made by Horizon Power, referred to above at paragraph 7.40, that it was:<sup>316</sup>

- “mitigating identified high and extreme risks to ensure it meets statutory and regulatory obligations for its Distribution Systems”;
- engaged in the “replacement of assets that have reached the end of their economic life”; and
- addressing “other safety issues” in its distribution networks.

- 7.49 The Committee is also struck by the similarity of Horizon Power's candid disclosures, to those that were eventually made by Western Power in its 15 September 2011 Media Release, as discussed at paragraph 7.99 below.

### **Estimates Committee Hearings - June 2011**

- 7.50 Reference to the Council Hansard record from the 2011 Estimates Hearings on Monday, 27 June 2011, reveals that Western Power senior management representatives were asked direct questions about its wooden power pole replacement program for the estimates period (including out-years) on two occasions.<sup>317</sup> On the first of these occasions, the following question was asked by Hon Liz Bejhat MLC:<sup>318</sup>

*In relation to the Toodyay disaster with the fire and poles, there was the 2008 audit which was referred to in Commerce at page 460 of the budget papers, but it is also referred to elsewhere. Can you give us*

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<sup>316</sup> *Ibid*, p614.

<sup>317</sup> Legislative Council (2011) [\*Hansard: Standing Committee on Estimates and Financial Operations. 2011-12 Budget Estimates Hearings\*](#), Western Power. 27 June 2011, pp 7 and 17-18.

<sup>318</sup> *Ibid*, p7.

*an update on what is happening to the audit and the works that are being done so that we can be confident - as much as you can ever be confident when you have wood poles - that we are not likely to see another disaster like Toodyay happen?*

*... Hansard record from the 2011 Estimates Hearings ... reveals that Western Power senior management representatives were asked direct questions about its wooden power pole replacement program for the estimates period (including out-years) on two occasions.*

- 7.51 In response to this question, the Minister for Energy provided an initial, general reply from a Ministerial perspective. The Minister concluded his remarks with the following observations:<sup>319</sup>

*As I said, when you have one of the largest above-ground networks in the world, it brings with it special challenges and special problems. It is an ageing network. It is a network that has been, I have to say, neglected by successive governments over decades, but the fact that we have really injected so much money over the last couple of years, and the inspection backlog has been reduced to zero, is testament to Western Power.*

- 7.52 The Committee notes that, at this point in the Estimates Committee hearing the Managing Director of Western Power had the opportunity to take the Parliament into his confidence about such matters as:

- EnergySafety's ongoing concerns about the nature and pace of progress by Western Power, relating to its wooden power pole asset management systems, processes and practices (including the still open 2009 Inspector's Order);
- EnergySafety not endorsing the validity of the actual inspection methodology that was being implemented by Western Power through the program of wooden power pole inspections;
- the results of the first round of tests of 50 wooden power poles to destruction under controlled circumstances to determine the effectiveness of its "enhanced" sound-dig-and-drill inspection methodology - tests which had proved inconclusive;

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<sup>319</sup>

*Id.*

- the then current 2009 Notice of Compliance Failure, at Part 7, relating to wooden power pole asset management, issued by the ERA;
- the full details of the wooden power pole challenge that was being identified by Western Power through its own AA3 Submission preparations; and
- The implications of ERA's March 2011 report on an inquiry into Horizon Power's funding proposal.

*... at this point in the Estimates Committee hearing the Managing Director of Western Power had the opportunity to take the Parliament into his confidence ...*

7.53 What the Managing Director elected to tell the Parliament at that time, and in response to such a direct question, was as follows:<sup>320</sup>

**Mr Aberle:** *If I could just for clarity point out that the backlog is down at the functional minimum which is not zero - there is always between zero and 1 000 waiting to be done because you do not go out and do one pole at a time - but sitting at that level is tantamount to nil. For absolute clarity there is always a small population programmed to be inspected in the immediate weeks.*

7.54 The Committee notes that, if the Managing Director had genuinely sought to provide “absolute clarity” about this matter, he might have included the qualification that was acknowledged in evidence before this Committee on Wednesday, 9 November 2011; namely, that approximately 0.7% of the wooden power pole asset base (well over 4,000 wooden power poles) had an unknown location, as the following exchange confirms.<sup>321</sup>

**Mr Aberle:** *No; let us be absolutely clear: 0.7 per cent was in reference to the knowledge of location of poles.*

**Mr de Laeter:** *It was about the understanding of how many poles we have in our network.*

**Hon JON FORD:** *Right, so you do not actually know, out of those 4 760 poles, what their current status is?*

**Mr Aberle:** *There is a small number of around about 4 000*

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<sup>320</sup> *Ibid*, p7.

<sup>321</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 9 November 2011, p19.



... approximately 0.7% of the wooden power pole asset base (well over 4,000 wooden power poles) had an unknown location ...

- 7.55 Later in the same Legislative Council Estimates Committee hearing, Hon Kate Doust MLC addressed a question to the level of disclosure concerning corrective maintenance works. The question and the subsequent exchange were as follows:<sup>322</sup>

**Hon KATE DOUST:** *My question relates to the heading “New Works” on page 620. I note that under the line item for wood pole replacement and reinforcement and pole-top replacement, there is no allocation for the replacement of overhead customer connections, targeted reliability work and wood pole replacement and associated works after 2011–12. For each of these items, can you please tell me why there are no additional allocations?*

**Hon PETER COLLIER:** *Yes.*

**Mr Peacock:** *I think the page you referred to relates to Western Power provisions.*

**Hon KATE DOUST:** *No; it refers to new works.*

**The DEPUTY CHAIR:** *It is in the table about two-thirds of the way down under “New Works”.*

**Mr Peacock:** *That entire table and this particular section of the budget papers relates just to the budget paper provisions. Our full investment program is contained on pages 618 and 619. What you have looked at is simply a subset of that work. The full extent of the wood pole replacements in that asset category is included on page 619 within the distribution network spend.*

**Hon KATE DOUST:** *Is that under the heading “Distribution”?*

**Mr Peacock:** *Yes.*

**Hon KATE DOUST:** *Under “Customer-Driven”?*

**Mr Peacock:** *No.*

**Hon KATE DOUST:** *Sorry; it is the asset replacement.*

<sup>322</sup> Legislative Council (2011) [Hansard: Standing Committee on Estimates and Financial Operations. 2011-12 Budget Estimates Hearings](#), Western Power. 27 June 2011, p17.

**Mr Peacock:** *That is correct.*

**Hon KATE DOUST:** *Okay; that is fine.*

**Mr Aberle:** *There is no provision in the out years. We do not anticipate needing one. We are expecting it to be funded.*

- 7.56 The Committee notes that the Hon Kate Doust MLC specifically asked about network power pole replacements in the estimates out-year period. In response to the Honourable Member's question, Western Power's General Manager, Strategy and Finance answered that *"Our full investment program is contained on pages 618 and 619. What you have looked at is simply a subset of that work. The full extent of the wood pole replacements in that asset category is included on page 619 within the distribution network spend."* In the same place, Western Power's Managing Director further stated that *"There is no provision in the out years. We do not anticipate needing one. We are expecting it to be funded."*<sup>323</sup>

*"There is no provision in the out years. We do not anticipate needing one. We are expecting it to be funded."*

- 7.57 For the second time in the 2011 Legislative Council's Estimates hearings, Western Power's senior management were given a direct question that gave them the opportunity to advise the Parliament of the true state of affairs of its network wooden power poles. Tellingly, the Managing Director answered that; *"There is no provision in the out years. We do not anticipate needing one. We are expecting it to be funded."* This indicates strongly that the full financial impact of the network wooden power pole challenge outlined in Western Power's AA3 Submission to the ERA was known to the Managing Director at the time of the 2011 State Budget being prepared and handed down. This is not surprising, as both the Office of Energy and Western Power have confirmed separately to this Committee that Western Power's AA3 Submission was developed over a period of time extending back to at least October 2010.<sup>324</sup>

- 7.58 Western Power has subsequently provided the Committee with confidential documents that demonstrate clearly that, as early as May 2011, Western Power management had settled on hard figures, with respect to its proposed safety related expenditures for the AA3 period, prior to submitting those figures to the Western Power Board. These hard figures do not vary materially from the figures included in the Media Release of 15 September 2011. The fact that Western Power's Managing

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<sup>323</sup> *Id.*

<sup>324</sup> Mr Peter Hawken, Senior Manager, Regulatory Framework, Office of Energy, *Transcript of Evidence*, 19 October 2011, p14 (*"late 2010"*); and, Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 9 November 2011, p15.

Director was asserting to this Committee as recently as 5 December 2011 in contrary terms, is a matter that will be addressed in a later report.

*... as early as May 2011, Western Power management had settled on hard figures, with respect to its proposed safety related expenditures for the AA3 period, prior to submitting those figures to the Western Power Board.*

7.59 The Committee, therefore, finds that Western Power's Budget Papers do not disclose, either in a manner equivalent to the related disclosures of Horizon Power or in a manner commensurate with the state of knowledge held by Western Power itself, the full extent of the serviceability and safety challenges faced by Western Power with respect to its network wooden power poles.

7.60 On the basis of the foregoing discussion, the Committee finds that Western Power had formed a view about the nature of the risk posed by its non-compliant wooden power pole asset base, and the extent of the resource needs required to begin to address this risk prior to the 2011 Estimates process. In addition, given that Western Power was asked direct questions in the context of the 2011 Legislative Council Estimates hearings, these questions could only be properly answered by making full disclosure of material information that was in the possession of relevant officers of Western Power but was not, in fact, disclosed at the time. The Committee therefore finds that Western Power may have either intentionally, or inadvertently, provided misleading testimony in the course of the 2011 Legislative Council Estimates hearings by failing to advise that Committee of relevant detail that was known to Western Power and which, if known, would have materially altered the Committee's understanding of the relevant appropriations.

*As a matter of fairness, these propositions were put to Western Power by this Committee in a public hearing on Monday, 21 November 2011 ,,,*

7.61 As a matter of fairness, these propositions were put to Western Power by this Committee in a public hearing on Monday, 21 November 2011, as is demonstrated in the following Hansard extract:<sup>325</sup>

<sup>325</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p2.

**Hon JON FORD:** *I will give the Chairman a rest. This committee has received evidence that suggests Western Power and you as managing director may have provided the Parliament with inaccurate or misleading information through the budget papers over the past six years. Some of this evidence has been put to you in these hearings. This provision of inaccurate or misleading information may have been inadvertent or it may have been intentional. Do you have any comments about this suggestion?*

**Mr Aberle:** *We do not believe that we have, and we certainly never had any intention to provide any misleading information.*

...

**Hon JON FORD:** ...

*This committee has received evidence that suggests Western Power and you as managing director may have provided the Parliament with inaccurate or misleading information through the estimates process over the past six years; some of this evidence has been put to you in these hearings. This provision of inaccurate or misleading information may have been inadvertent or it may have been intentional. Do you have any comments about this?*

**Mr Aberle:** *We have certainly never intentionally provided any misleading information to the budget estimate process.*

... Western Power may have either intentionally, or inadvertently, provided misleading testimony in the course of the 2011 Legislative Council Estimates hearings by failing to advise that Committee of relevant detail that was known to Western Power and which, if known, would have materially altered the Committee's understanding of the relevant appropriations.

- 7.62 These matters relate to the operations of the Standing Committee on Estimates and Financial Operations. Accordingly, in the foregoing paragraphs of this Report, this Committee acquaints the Legislative Council of the evidence it had obtained, and the findings it has made on the basis of that evidence. Any further action that might arise, with respect to the foregoing evidence and findings, is therefore a matter between the

Legislative Council and the Standing Committee on Estimates and Financial Affairs without further input from this Committee.

### **Western Power's Annual Report 2010/2011 Signed Off**

- 7.63 On Wednesday, 7 September 2011, the Annual Financial Statements of Western Power were signed off by the Auditor General for Western Australia. Relevant disclosures by Western Power in previous Annual Reports have already been considered above at paragraphs 3.29, 3.57, 5.46, 5.95, 5.99 and 6.10. The Committee has been unable to identify a single disclosure in Western Power Annual Reports prior to that for 2010/2011 that approaches the assertion contained in Western Power's Media Release that the "*network is effectively reaching the end of its useful and safe life*" and requires an accelerated 20 year program of investment commencing with \$1.222 billion over five years. The Committee has carefully examined Western Power's 2010/2011 Annual Report for information about the condition of its network wooden power poles. The full extent of disclosures in this respect are as follows:

#### ***"Focusing on the Future***

*The Western Power network is aging and issues such as climate change and the shift to a low carbon economy continue to influence public policy debate in the energy industry. In response, Western Power strives to identify and implement solutions to build and operate the network of the future rather than simply replicate that of the past, moving from a static to a more organic view of the electricity system including customers.*"<sup>326</sup>

#### ***"OUR REGULATORY ENVIRONMENT***

...

*Preparations are well underway for our third Access Arrangement for the five year period from 1 July 2012 to 30 June 2017.*"<sup>327</sup>

*... the Committee has formed the view that there was no disclosure in the 2010/2011 that can be described as sufficient.*

<sup>326</sup> Western Power, [Annual Report 2010/11](#), September 2011, p10.

<sup>327</sup> *Ibid*, p16.

***“PUBLIC SAFETY***

*Community safety is paramount to our work. All members of the community live and work around our essential infrastructure. Maintaining a safe electricity network is therefore of the utmost importance to us. We constantly work to ensure our assets and work practices do not compromise safety.”*<sup>328</sup>

***“MANAGING THE NETWORK***

***HIGHLIGHTS***

*... 171,183 wood poles inspected 12,633 wood poles replaced 11,787 wood poles reinforced ... 89.8% of major work projects delivered on budget 4.1% of major work projects delivered over schedule ...”*<sup>329</sup>

- 7.64 Accordingly, the Committee has formed the view that there was no disclosure in the 2010/2011 Annual Report that can be described as sufficient to suggest to a reasonable reader that Western Power’s “*network is effectively reaching the end of its useful and safe life*”. However, the Committee also finds that, at some time prior to signing the Annual Report the senior management of Western Power had formed such a view, together with the proposition that a 20 year program of increased capital maintenance, replacement and reinforcement was required to address this challenge, with related outlays for the first five years of this 20 year period amounting to \$1.222 billion.

*This raises the question of whether, in all the circumstances, Western Power has fully complied with the reporting requirements of the Electricity Corporations Act 2005, in so far as the Parliament is concerned.*

- 7.65 The Committee also notes that, while the *Electricity Corporations Act 2005* at section 90, provides for Western Power to produce a “*Strategic Development Plan*”. Such a plan is to include details of competitive strategies, pricing of products, productivity levels, financial requirements, capital expenditure and personnel requirements. A strategic development plan is to cover a forecast period of 5 years (or a lesser period agreed with the Minister). Once agreed, this plan is to be tabled in Parliament. Given that Western Power has never tabled a strategic development plan in Parliament, the Committee is of the view that Western Power’s statutory disclosure requirements for its Annual Reports should have been interpreted broadly by Western Power in order to

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<sup>328</sup> *Ibid*, p24.

<sup>329</sup> *Ibid*, p30.

meet its overriding accountability to the Parliament. A reasonable reading of Western Power's Annual Reports since 2006, at least with respect to its network wooden power pole assets, does not reflect such a corporate commitment to Parliamentary accountability.

*... this Committee does not accept the assertion made by the Managing Director that Western Power had made "many references" equivalent to those in the 15 September 2011 Media Release.*

- 7.66 This raises the question of whether, in all the circumstances, Western Power has fully complied with the reporting requirements of the *Electricity Corporations Act 2005*, in so far as the Parliament is concerned. When this question was put to the Managing Director of Western Power in a public hearing before this Committee, the following exchange occurred:<sup>330</sup>

**The CHAIRMAN:** *Reaching the end of its useful life and reaching the end of its safe life. You do not think that is significant?*

**Mr Aberle:** *What is significant is that that is not a change in the state of affairs. That has been the case for all of those years I talked about.*

**The CHAIRMAN:** *We had not said it ever before. To our searching, you have not said that at any time before.*

**Mr Aberle:** *I understand what you are fixated on there. What we have made very clear is what needs to be invested in the network. It has been very clear for a long period of time not only in statements that I have talked about to Parliament but also in other documents in more public statements. I think it has been quite clear.*

**Hon ED DERMER:** *When was the first occasion that you referred to the usefulness and the safety of the network?*

**Mr Aberle:** *I cannot recall in those specific terms, but as I said, there are very many references to the network's age, to the fact that many poles are older than 40 years, the fact that we need significant investment to uplift it. That statement about it reaching the end of its safe and useful life is no different from any of those. It is describing*

<sup>330</sup>

Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, Monday, 21 November 2011, p8.

*the same state, which we move towards if we do not continue to ramp up our investment. It is as simple as that.*

**Hon ED DERMER:** *It is a very different statement. I can say that I am investing in a network and I am making progress towards improving it, because I am investing the effort and resources in it. It is a very different statement to say that the network is becoming no longer useful or no longer safe. And to the best of our knowledge, the first time that was said was in the media release of 15 September. I think that you are making vague, suggestive references to that type of statement being made at an earlier date. That is why I am asking you to tell me when was the first time a statement was made—not that investment was occurring in the network, but that were concerns about the safety and utility of the network. I am trying to be as explicit as possible, and I would like to know when you first made that statement. In fact I would like to know each of the occasions on which that statement was made prior to 15 September.*

**The CHAIRMAN:** *Mr Aberle, even taking the words you have said a little earlier, why didn't you during 2010–2011 annual estimates hearing bring this information to the public? Estimates hearings are about the current budget and about outgoing years.*

**Mr Aberle:** *And the estimates included forward estimates that included an anticipated increase in investment in the network because of that state.*

*... a reasonable reading of related disclosures in Western Power's 2010/2011 Annual Report, signed off on 7 September 2011, would lead the reader to believe that Western Power was "managing the network" as a going concern.*

- 7.67 As discussed in the paragraphs above, this Committee does not accept the assertion made by the Managing Director that Western Power had made “many references” equivalent to those in the 15 September 2011 Media Release to the effect that “network is effectively reaching the end of its useful and safe life”, and that a 20 year program of increased investment was needed to correct this state of affairs. The announcement of 15 September 2011 stated that a five year period of accelerated investment was required, involving corrective investments totalling \$1.222 billion. No such announcement or advice was ever made in those terms prior to 15 September 2011. On the contrary, a reasonable reading of related disclosures in Western Power’s 2010/2011 Annual Report, signed off on 7 September 2011, would lead the reader to



believe that Western Power was “*managing the network*” as a going concern, and not that the network was “*reaching the end of its useful and safe life*”.

- 7.68 In order to assure itself of this fact, the Committee obtained the opinion of a leading Accounting professional about the degree of disclosure relating to Western Power’s wooden power poles in the 2010/2011 Annual Report. Notre Dame University Professor of Accounting, Derek Parkin provided the Committee with the following opinion on this matter:<sup>331</sup>

*Had there been more expansive discussion earlier in the Annual Report, this could have been specifically referred to in the Directors’ Report. However, in the absence of such discussion, the disclosure in the Directors’ Report would appear to be inadequate in the context of the media release of 15 September 2011 and, more properly, the information known to the Directors at the time of finalising their report.*

...

*Hence, in my opinion, there was insufficient disclosure in Western Power’s 2011 Annual Report, other than the Financial Report, in relation to the imminent AA3 submission to the Economic Regulation Authority on 30 September 2011, the subject of the media release by Western Power on 15 September 2011.*

- 7.69 In addition, the Committee notes that Western Power’s management had been working to develop a detailed AA3 proposal from at least October 2010. The steering committee for this project included the Managing Director personally. This proposal contained a specific compliance-related component for wooden power poles which, as far back as May 2011, was sufficiently detailed as to be materially equivalent to the final AA3 submission lodged with the ERA for its consideration in September 2011. Western Power had sought endorsement of its AA3 submission from the Department of Treasury prior to August 2011. Board approval for Western Power’s final AA3 submission was given at the same Board meeting which approved the 2011 Annual Report.

*“... there was insufficient disclosure in Western Power’s 2011 Annual Report, other than the Financial Report, in relation to the imminent AA3 submission to the Economic Regulation Authority on 30 September 2011 ...”*

<sup>331</sup>

Expert’s Report from Professor Derek Parkin FCA, CPA, FAICD, 22 December 2011, p17.

- 7.70 This Committee has formed the view that the foregoing events were significant activities of Western Power both during the 2010/2011 financial year, and during the “*after reporting date*” period. In addition, the AA3 proposal clearly had the potential to “*significantly affect*” Western Power’s “*operations in future years*” as is envisaged by the *Electricity Corporations Act 2005* Sch 4 cl(11)(d).
- 7.71 If this Committee’s understanding of the activities of Western Power, and the construction of Western Power’s statutory reporting obligations, as outlined in the preceding paragraphs is correct it follows that Western Power’s Director’s Report which appears in the 2010-2011 Annual Report may not comply with the requirements of the *Electricity Corporations Act 2005*, at Schedule 4, clause (11).

*Recommendation 1*

- 7.72 Accordingly, this Committee makes the following recommendation:

**Recommendation 1: The Committee recommends that, as a matter of urgency, the Minister for Energy require Western Power to issue a formal addendum to Western Power’s 2010/2011 Annual Report. This addendum should be sufficient to correct the existing Director’s Report such that Western Power fully complies with the disclosure requirements of the *Electricity Corporations Act 2005*, Schedule 4, clause 11, as these apply to Western Power’s *Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017*, lodged with the Economic Regulation Authority, a submission that was approved by the Board of Western Power on the same date that the Board approved the 2010/2011 Annual Report.**

*Concerning the Auditor General*

- 7.73 The Committee notes that, none of the matters discussed in the foregoing paragraphs was addressed in the Auditor General’s Audit Opinion on Western Power’s 2010-2011 Annual Report.
- 7.74 As part of Western Power’s audit process, Western Power provides the Auditor General with a “*Management Representation Letter*”. This letter provides the Auditor General with a level of assurance about certain matters, on the basis of binding, personal assurances by named executives of the corporation.

... none of the matters discussed in the foregoing paragraphs was addressed in the Auditor General’s Audit Opinion on Western Power’s 2010-2011 Annual Report.

7.75 Western Power's 2011 Management Representation Letter (the **2011 Management Representation Letter**) was signed by both Western Power's Managing Director, and the Acting General Manager, Finance. The letter is dated 6 September 2011.

7.76 Item 34 of Western Power's 2011 Management Representation Letter to the Auditor General reads as follows:<sup>332</sup>

*All insurable assets and risks are to the best of our knowledge and belief fully covered by insurance.*

7.77 Under Western Power's Access Code, cost recovery from customers is permitted where unforeseeable losses are incurred by the corporation as a result of "force majeure events". Force majeure events are defined under the provisions of *Electricity Distribution Regulations 1997* r36. This regulation, at paragraph (g), provides as follows:

*A force majeure event in respect of a party to a distribution access agreement or a person to which these regulations apply means any event outside the party's control, including ... any significant plant or equipment failure which could not have been avoided by the exercise of good electricity industry practice;*

7.78 Western Power's AA3 funding submission to the ERA covering the period 2012-2017 mounts a case in that access arrangement period for recovery from customers for the unforeseen costs of a March 2010 storm. In the course of this discussion, Western Power makes the following disclosure:<sup>333</sup>

***Description of relevant insurance***

*We maintain an insurance program at a quality and coverage consistent with good electricity industry practice. At all times, our insurance has reflected the level of cover available in commercial insurance markets and is of a standard of a reasonable and prudent person.*

*Our insurance program covers all corporate insurance exposures including property, public and products liability, motor and workers compensation, as well as other minor insurance classes. Our property insurance covers damage to physical assets including buildings, terminals and substations. Equipment other than that which is on or within 300 metres of an insured structure is not*

<sup>332</sup> Western Power (2011) *Management Representation Letter to OAG*. 6 September 2011, p4.

<sup>333</sup> Western Power (2011) [Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. \(Access Arrangement Information\)](#). 30 September 2011, p278.

*covered. The policy specifically excludes damage to transmission and distribution poles and overhead lines. All above ground transmission and distribution lines, including wire, cables, poles, pylons, towers, other supporting structures and any equipment of any type which may be attendant to such installations are not covered by an insurance policy.*

*Prior to 2001, we had some coverage for damage to transmission and distribution poles and overhead. However, insurers have since ceased provision of this cover and as a result we are unable to obtain insurance cover for transmission and distribution poles and overhead lines.*

*"All insurable assets and risks are to the best of our knowledge and belief fully covered by insurance."*

7.79 The Committee has been separately advised by one of Australia's major re-insurance companies that it is prepared to re-insure electricity network wooden power poles. According to that source, what would be required would be the assessment of risk, and the setting of an appropriate re-insurance premium. The implications of this information, is that insurance may, in fact, be available for Western Power's network wooden power poles. This may mean Western Power self-insuring, but, in principle, insurance does nevertheless appear to be available.

7.80 Indeed, in an answer to subsequent questions on notice from this Committee about the availability of insurance for its network wooden power poles, Western Power has, itself acknowledged that insurance may be available. This answer contained the following information:<sup>334</sup>

*Western Power's view is that the factors assessed by insurers, the cost of insurance and the limited scope of the cover provided has resulted in its poles not being commercially insurable. The cost of maintaining the network is not insurable.*

7.81 In a subsequent response to this Committee, Western Power advised that:<sup>335</sup>

*Insurance for physical damage to wooden power poles has been either unavailable or not financially feasible since 2000/01 due to reinsurance treaty restrictions.*

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<sup>334</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "Response to Questions on Notice", 5 December 2011, p17.

<sup>335</sup> *Ibid*, p5.

*... there is a difference between insurance being unavailable on the one hand, and not being commercially feasible on the other.*

- 7.82 The Committee is of the view that there is a difference between insurance being unavailable on the one hand, and not being commercially feasible on the other. As at the date on which this Report was adopted by the Committee, Western Power has been unable to provide the Committee with a clear answer to the basic question of which of these situations applies to Western Power. In light of the precise wording of the Management Representation Letter to the Auditor General on this point, such ambiguity is concerning.
- 7.83 This ambiguity also raises questions about the factual accuracy of Western Power's disclosures in its AA3 submission to the ERA. The Committee raised this apparent inconsistency directly with Western Power at a public hearing as is demonstrated in the following testimony:<sup>336</sup>

**The CHAIRMAN:** ... Let us move on from that. Did you sign the management representation letter that was provided by Western Power to the Auditor General dated 6 September 2011?

**Mr Aberle:** Yes, I believe I did, if I can just recover it.

**The CHAIRMAN:** Please refer back to exhibit H; an extract of which is now on the screen. You will recall that this exhibit is taken from Western Power's management representation letter to the Auditor General. The following statement appears in exhibit H —

*All insurable assets and risks are to the best of our knowledge and belief fully covered by insurance.*

*Are there any inconsistencies if Western Power is telling the ERA that wood poles are not insured on one hand, and the statement to the Auditor General that, "All insurable assets and risks are to the best of our knowledge and belief fully covered by insurance"?*

**Mr Aberle:** No, I do not believe so. It goes to the question I said I would take on notice earlier, which is around the structure of the insurance of the asset base.

<sup>336</sup>

Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, Monday, 21 November 2011, p33.

- 7.84 The Committee has reflected on the context within which these disclosures were made. Reference to section 12.2.4 of Western Power's "*Access Arrangement Information for 1 July 2012 to 31 June 2017*" document reveals the following:<sup>337</sup>

***Cost recovery for unforeseen events***

*We are seeking an adjustment to target revenue for AA3 of \$6.9 million to recover the efficient and unrecovered distribution related costs for the March 2010 storm. Sections 5.4 to 5.6 of the current access arrangement permits Western Power, in certain circumstances, to include unforeseen costs resulting from a force majeure event in its target revenue for the next access arrangement period:*

"Sections 5.4 to 5.6 of the current access arrangement permits Western Power, in certain circumstances, to include unforeseen costs resulting from a force majeure event."

- 7.85 The relevant storm is further described in the same place as follows:<sup>338</sup>

***Description of the March 2010 Storm***

*On Monday 22 March 2010, a severe storm front passed over Perth bringing heavy rainfall, hail and strong winds up to 120 kilometres per hour. The Bureau of Meteorology reported rainfall up to 45 millimetres in some areas, significant lightning activity and the largest hail known to have occurred in Perth, all of which caused significant damage. The storm caused severe disruptions to the network. In total, power supplies for approximately 250,000 customers were affected and around 8000 MWh of load was unavailable for 31 hours. Figure 98 demonstrates the severity of the storm which affected six substations, contributing to the peak of 167,777 customers with interrupted supply.*

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<sup>337</sup> Western Power (2011) [\*Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. \(Access Arrangement Information\)\*](#). 30 September 2011, p275.

<sup>338</sup> *Ibid*, p276.

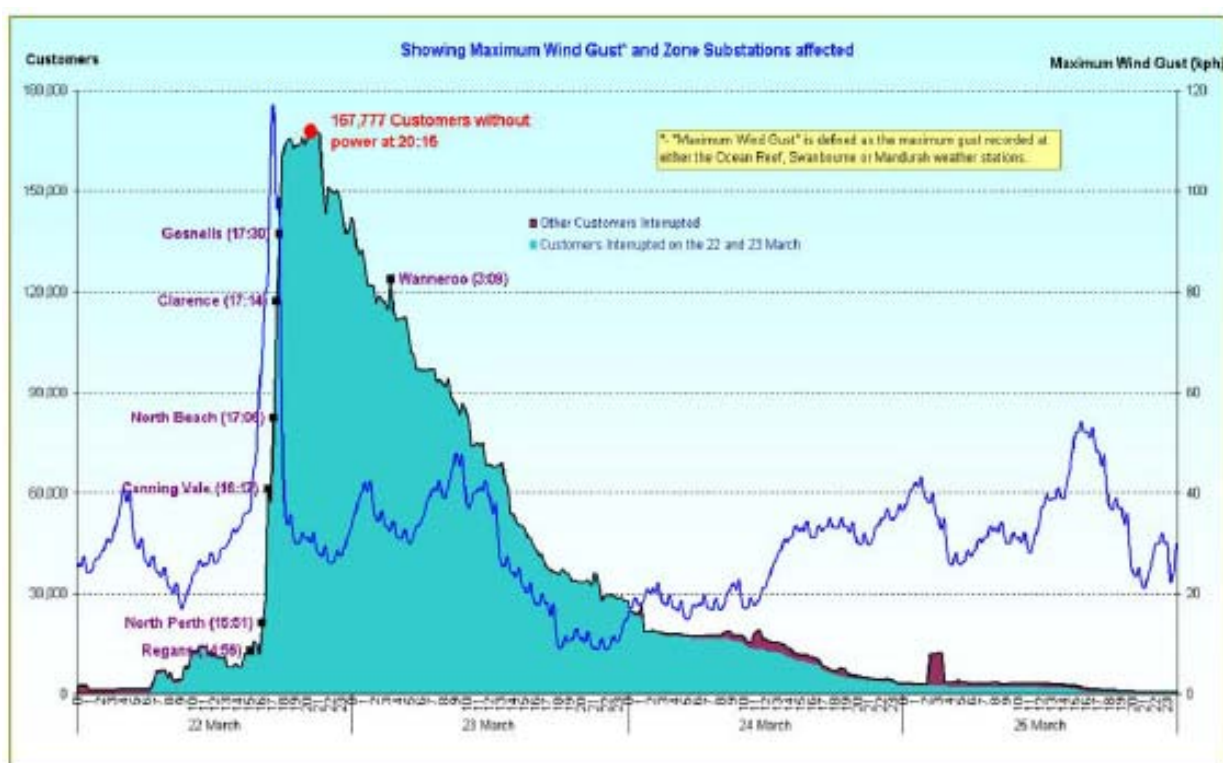


Figure 98: Number of customers affected by the March 2010 storm

- 7.86 The Committee acknowledges the severity of the March 2010 storm to which the above extract applies. However, Western Power has attempted to characterise it technically as a “*force majeure event*” with the result being that Western Power would be free to recover the costs incurred from its network customers. Presumably, to the extent that the damage claimed from the storm was the loss of failed network wooden power poles, such a claim is, perhaps, understandable, given that these are uninsured.

*It is therefore unclear to the Committee in what sense it is beyond Western Power's ability to foresee or control to ensure that its network wooden power poles are compliant with relevant industry standards.*

- 7.87 The Committee notes that industry standards require electricity network wooden power poles to have a factor of safety of one. A factor of safety of one, requires an electricity network wooden power pole to be able to withstand winds, transverse to the relevant line, up to 140 kilometres per hour. It is therefore unclear to the Committee in what sense it is beyond Western Power's ability to foresee or control to ensure that its network wooden power poles are compliant with relevant industry standards.

7.88 When this question was raised directly with Western Power in evidence before the Committee at a public hearing, the following exchange occurred:<sup>339</sup>

*"Good industry practice is to operate the network with a good risk profile, with a good process for determining the serviceability of poles, and to replace them over time in a way that is both affordable and able to be resourced."*

**The CHAIRMAN:** *We have been talking about that for a while, so let us move on. The next slide contains an extract from regulation 36 of the Electricity Distribution Regulations 1997. This regulation contains the operative definition of a force majeure event. Are you aware of this regulation?*

**Mr de Laeter:** *Yes.*

**Mr Aberle:** *Yes.*

**The CHAIRMAN:** *The first requirement is that the event should be outside Western Power's control.*

**Mr Aberle:** *Correct.*

**The CHAIRMAN:** *In what sense is it beyond Western Power's control for its wooden poles to meet industry standards?*

**Mr Aberle:** *Look, it goes to the fact that a network of this size and scope is constructed to a series of standards over a long period of time. In common with all the other operators of wooden pole networks, as standards evolve and improve we do not instantaneously go back and replace the many, many thousands of assets that may have been built to an earlier standard but we migrate through that process as time goes by. That is the reason that we have been looking at this risk and age-based profile, to help us to home in on that. So, the outcome is that some of those poles can have been built to a standard that was earlier, as indeed are other parts of the network and other people's networks, for that matter. So, they can in fact have been built to a standard of the day, but not to the current standard.*

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<sup>339</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, Monday, 21 November 2011, p31.



**The CHAIRMAN:** *As well as being outside of Western Power's control, one of the requirements of the definition is that the failure complained of could not have been avoided by the exercise of good electricity industry practice. If your wooden power poles failed because they did not meet industry standards, how can Western Power prove that it complies with good industry practice as the definition requires?*

**Mr Aberle:** *Good industry practice says that if you have an extant network built to a variety of standards over a period of time, no-one expects that as standards change you will run back and replace everything at once. The expectation is that you will migrate the system to that standard over a period of time. Good industry practice is to operate the network with a good risk profile, with a good process for determining the serviceability of poles, and to replace them over time in a way that is both affordable and able to be resourced. That is precisely the circumstance. You can have a situation where a pole might fall at 120 kilometres an hour because it is built to an earlier standard, but it is not feasible to go out and rebuild the network every time a standard changes. This practice is actually common across the country.*

**The CHAIRMAN:** *So when a wooden power pole fails in 120-kilometre-an-hour wind, can it be reasonably described as a force majeure event?*

**Mr Aberle:** *Subject to what I just described, I do not think we would claim it but it could be reasonably claimed on the basis of what I just articulated.*

*"The default position is that if the wind is shown to be under 140 kilometres an hour, that is an unassisted pole failure."*

- 7.89 At the same public hearing, the Chairman later asked Western Power if its own classification system classified wooden power pole failures in winds of less than 140 kilometres per hour:<sup>340</sup>

**The CHAIRMAN:** *I need to put the question to you again: is it true that Western Power's own failure classification system—your own*

<sup>340</sup>

Mr Mark de Laeter, General Manager, Networks, Western Power, *Transcript of Evidence*, Monday, 21 November 2011, p32.

*system—treats wood pole failures and winds of less than 140 kilometres an hour as unassisted failures; true or false?*

**Mr de Laeter:** *In some circumstances true —*

**The CHAIRMAN:** *True or false?*

**Mr de Laeter:** *In some circumstances true. The default position is that if the wind is shown to be under 140 kilometres an hour, that is an unassisted pole failure.*

- 7.90 The suggestion was made to the Committee that the 135 wooden power poles which failed in the March 2010 storm may have been due to localised “micro-bursts” of wind over 140 kilometres per hour. The relevant exchange was as follows:<sup>341</sup>

**The CHAIRMAN:** *I make the point you are talking about microbursts at points may be getting over 140. I live in the central Wheatbelt and so does Hon Jim Chown. The storms in February were over a large area. There is absolutely no way that you could argue that point.*

**Hon JIM CHOWN:** *From memory, I think the winds peaked at around 130 kays. I witnessed poles the day after —*

**Mr Brown:** *We have actually had transmission tower lines fall over where the weather bureau said they only had 120 kilometres, and when we went out and investigated in the eastern Goldfields, they said, “No, there were probably microbursts around 250.”*

**The CHAIRMAN:** *The point we are making here is that in the January event, over an area of probably 300 kilometres, over 300 of your poles came down. There was a microburst over 300 kilometres, is the point we are making. ...*

*... the foregoing evidence may indicate that Western Power has attempted to mislead both the Auditor General and the ERA about the issue of insurance over its network wooden power poles.*

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<sup>341</sup> Mr Ken Brown, Executive General Manager, Operations, Western Power, *Transcript of Evidence*, Monday, 21 November 2011, p33.

- 7.91 The Committee is concerned that the foregoing evidence may indicate that Western Power has attempted to mislead both the Auditor General and the ERA about the issue of insurance over its network wooden power poles. The Committee is also concerned that the foregoing evidence may indicate that Western Power has attempted to mislead the ERA about the eligibility of certain operational costs for consideration as “*force majeure events*”.
- 7.92 This raises a related point, namely the various reasons for non-insurance. For instance, contracts for insurance are contracts “*uberrimae fidei*” (utmost good faith). Non disclosure of relevant information by an insured under such contracts will render the contract legally unenforceable. It follows that, if Western Power’s asset records were deficient to a material extent that was not fully disclosed to an insurer, and an insurance contract were entered into based on imperfect knowledge of asset condition, an insurer may have cause to avoid any subsequent claim for unassisted wooden power pole failure.

... if Western Power’s asset records were deficient to a material extent that was not fully disclosed to an insurer, and an insurance contract were entered into based on imperfect knowledge of asset condition, an insurer may have cause to avoid any subsequent claim for unassisted wooden power pole failure.

- 7.93 This point was put to the Managing Director of Western Power in a hearing before the Committee as follows:<sup>342</sup>

**The CHAIRMAN:** *Okay. Securing insurance would require Western Power to make the necessary disclosures to an insurer for the insurer to adequately assess the risk, would it not? That is standard process. Okay? Does Western Power have adequate asset condition data for its network wooden power poles to allow it to satisfy that requirement?*

**Mr Aberle:** *You are asking me that?*

**The CHAIRMAN:** *Yes. Do you have enough information? Do you have enough data to satisfy an insurer?*

**Mr Aberle:** *Thank you. We believe so. It is not a perfect database—neither is anyone else’s in the country—but we would argue that we*

<sup>342</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, Wednesday, 14 December 2011, p21.

*have sufficient data to be able to decide on what is insurable and what is not.*

**The CHAIRMAN:** *Has an insurance case for this type of cover been mounted since 2001?*

**Mr Aberle:** *I cannot answer that offhand.*

**The CHAIRMAN:** *Well, can you find an answer to that? We will supply you with these questions later.*

*If so, the committee would like a copy of the case, and any response received from the insurer in question. What we want to know is whether the insurers said to you, "We are not going to insure you because you do not have a robust enough asset base to allow us to do that."*

**Mr Aberle:** *Right. To the best of my knowledge we have not had that response. I am fairly confident in saying that to you right now, but we will see what we can dig out.*

*... the evidence given to the Committee on the foregoing issues raises troubling questions.*

- 7.94 As at the time that this Report was adopted, the Committee was still awaiting a satisfactory response to the above question. The quality of the evidence given to the Committee on the foregoing issues raises troubling questions about Western Power's senior management to Parliamentary accountability.

#### *Auditor General's Response*

- 7.95 This Committee raised the issues canvassed at paragraph 7.71 above about the level of disclosure in Western Power's 2010-2011 Annual Report directly with the Auditor General in evidence. The Auditor General's response was that:<sup>343</sup>

*... we have identified numerous references across the five years as to a works program, inspection programs and capital expenditure on replacing poles, either due to damage (fire, wind, car crashes etc) or age.*

*The 2011 Annual Report specifically highlights both capital expenditure and operation expenditure issues within the Approved*

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<sup>343</sup> Tabled Document Ref: 28/09/11 from Mr Colin Murphy, Auditor General for Western Australia, tabled 28 September 2011, p4.

*Work Program. There has also been disclosure of a commitment to significant investment programs in order to meet safety, reliability and efficiency requirements and reliance upon future funding from shareholders*

*A number of annual reports include statements noting that more than 30% of the assets are greater than 40 years old and pointing to the ongoing challenge of staying within the borrowing limits required by the Department of Treasury and Finance.*

And later:<sup>344</sup>

*As highlighted in our answer [above] the rationale and program to replace aging power poles has been established. It is stated in many Western Power media reports, Hansard, Western Power annual reports and operational documents that there is considerable investment required in the pole replacement program.*

- 7.96 No subsequent comments, additional to those above, have been received by this Committee from the Auditor General in connection with the Committee's questions relating to the level of Western Power's disclosure about the wooden power pole investment program in its Annual Reports.

*The above responses by the Auditor General to questions from this Committee lack the level of critical analysis that the Committee would have expected from an independent Parliamentary Officer.*

- 7.97 The above responses by the Auditor General to questions from this Committee lack the level of critical analysis that the Committee would have expected from an independent Parliamentary Officer. As discussed at paragraphs 7.63 above, 7.104 below, and specific instances addressed throughout the body of this Report, this Committee does not accept that, prior to 15 September 2011, Western Power had ever made a public statement in terms equivalent to that made in Western Power's Media Release on that date about its AA3 submission to the ERA.

#### **Western Power's 15 September 2011 Media Release**

- 7.98 On Thursday, 15 September 2011 Western Power issued the following Media Release:<sup>345</sup>

<sup>344</sup>

*Ibid*, p5.

***Western Power's five year investment plan***

*Western Power is preparing to lodge its next five year investment plan to the Economic Regulation Authority (ERA) on September 30 as required under the relevant regulation. The plan seeks to meet forecast growth in number of new customers and in demand for electricity, improve safety in the network and maintain a quality service to the customer.*

*Managing Director Mr Doug Aberle said this is the beginning of an extensive process in which the ERA will closely scrutinise the proposal and will include opportunities for public comment. "This investment plan recognises Western Australia's growth and the need to upgrade the network to provide for new customers.*

*"WA has an old network and while it has supplied customers over many years it is reaching capacity and needs new infrastructure to meet future needs.*

*"It also needs substantial investment directed towards replacing poles and wires to improve safety levels.*

*"The network is effectively reaching the end of its useful and safe life."*

*"The network is effectively reaching the end of its useful and safe life.*

*"There were many years where levels of investment were below the amount required for asset replacement and we needed to overcome that legacy while working within economic and resourcing constraints. This has to be done while managing the challenge of replacing parts of the network and still supplying power.*

*"This five year investment plan is part of a longer twenty year plan to bring the network into shape," Mr Aberle said.*

*"Until we have replaced or reinforced 164,000 poles, replaced 1073 kms of power lines and replaced other parts of the network in the next five years, risks will continue to grow," Mr Aberle said.*

*The investment plan includes a capital expenditure program of \$5.810 billion and operating expenditure of \$2.714 billion – total investment of \$8.523 billion over five years commencing 1 July 2012, (expressed in real dollars at 30 June 2012).*

*The key areas of investment will be:*

- *Overall 5 year capital investment relating to growth and security (better protecting the network against outages) - \$3.373 billion includes:*
  - *Building infrastructure to support growth – enabling connection of 130,000 new customers and providing for increasing levels of consumption per customer*
  - *More than 50% of this investment is driven by specific customer requirements and connections*

*“Until we have replaced or reinforced 164,000 poles, replaced 1073 kms of power lines and replaced other parts of the network in the next five years, risks will continue to grow ...”*

- *Overall 5 year capital investment relating to safety - \$1.222 billion includes:*
  - *Replace and reinforce 164,000 wood poles across the network in next five years as part of a 20 yr program.*
  - *Addressing other high risk public safety issues – power line failures, mitigating bush fires and replacing service lines connecting homes and businesses.*
- *Overall 5 year capital investment relating to maintaining service - \$1.214 billion*
  - *Maintaining average reliability standards with some targeted improvement in some rural areas. (Currently power is supplied on average for 99.96% of the time in metropolitan areas and 99.92% of the time in rural areas)*

*Western Power’s network is one of the largest isolated networks in the world covering many high and extreme fire risk areas. It is subject to economic regulation administered by the ERA to ensure*

*that it provides customers with a quality service at an efficient price. The cost of running the network makes up approximately 40% of the electricity tariff. The overall tariff will be determined by government once the ERA has sought public comment and completed its analysis of Western Power's submission, in approximately nine months time.*

*The ERA will review Western Power's submission to ensure that:*

- *there is a demonstrable need for the investment proposed by Western Power;*
- *all non-network solutions have been considered;*
- *it is assured that the investment proposed will achieve the stated objectives; and,*
- *it will be undertaken at an efficient cost.*

*"The regulatory process provides strong incentives for Western Power to operate efficiently and provide quality service at a fair price", Mr Aberle said.*

7.99 The Committee once again notes the similarity of both the text and tone of the above Media Release, to the Budget Paper disclosures of Horizon Power discussed at paragraphs 7.40 and 7.47 above, that were made public some four months earlier.

*The CHAIRMAN: ... Was the media statement of 15 September 2011 approved by the board of Western Power prior to the announcement on 15 September 2011?*

*Mr Aberle: Yes, it was; certainly.*

7.100 On the first occasion that the Committee asked the Managing Director if the Board of Western Power had approved the foregoing Media Release, the exchange which occurred was as follows:<sup>346</sup>

*The CHAIRMAN: ...*

*Was the media statement of 15 September 2011 approved by the board of Western Power prior to the announcement on 15 September 2011?*



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**Mr Aberle:** *Yes, it was; certainly.*

7.101 The Chairman then asked for details of the Board's approval as follows:<sup>347</sup>

*The CHAIRMAN: Could you give us the date that was approved?*

*Mr Aberle: No. I approved it and shared it with the board, so it did not get a formal debate at a board meeting. But they were certainly aware of it and approved it being released.*

*The CHAIRMAN: Could you give us the date that was approved?*

*Mr Aberle: No. I approved it and shared it with the board, so it did not get a formal debate at a board meeting. But they were certainly aware of it and approved it being released.*

*The CHAIRMAN: We will be seeking to get a copy of those minutes of the board.*

*Mr Aberle: As I said, it was not formally submitted to a board meeting, but the board was aware of the submission.*

*The CHAIRMAN: We will be interested to see how it was submitted and where it —*

*Hon JIM CHOWN: The board does keep minutes, I assume.*

*Mr Aberle: It does of its formal meetings. I am simply saying —*

*Hon JIM CHOWN: Whether it is informal or formal.*

*Mr Aberle: I am simply saying that they were aware of its release and of its content, but it was something that fell under my accountability.*

7.102 The variability of the Managing Director's testimony above, in response to such a straightforward question was separately revisited at the same hearing as follows:<sup>348</sup>

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<sup>346</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, Monday, 21 November 2011, p4.

<sup>347</sup> *Id.*

<sup>348</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, Monday, 21 November 2011, p12.

**Hon JON FORD:** *In one of the earlier questions, which was; Was the media statement of 15 September 2011 approved by the board of Western Power prior to 15 September 2011, you said that it was approved. Then, when you were pressed on the question and asked, “What date did the board give approval?” you said, “It’s not like that; it’s not likely to be minuted. They were made aware.” There is a big difference between “approved” and “aware”—what is it, approved or aware?*

**Mr Aberle:** *They were aware. It is my accountability to approve things like press statements and so on as a member of the board and as the managing director. Before we declared it, we made them aware that was the intention. It is not something that goes to the board for them to sign off on, but they were aware. That is exactly what it was.*

**Hon JON FORD:** *Why did you not say that to us when you were asked? It is a very simple response that you gave us then.*

**Mr Aberle:** *I think I did. I clarified that to you because —*

**Hon JON FORD:** *No, you did not.*

**Mr Aberle:** *— you then asked for minutes and I thought, “Oh, they’re talking about something that went to a formal minuted meeting”, and of course it was a matter of them being aware of what we were doing. I have made it very clear to you.*

**Hon JON FORD:** *You have now but then —*

**Mr Aberle:** *As I did then.*

<p><i>... the above testimony of the Managing Director can only be described as evasive.</i></p>
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- 7.103 This Committee’s view is that the above testimony of the Managing Director of Western Power can only be described as evasive. It is troubling that such a senior public sector executive officer should give evidence to a Parliamentary committee that can reasonably be characterised in such a manner. Not for the first time in the conduct of this inquiry, the Committee have had cause to reflect on the extent to which Western Power views itself as being directly accountable to the Parliament. This is a matter that will be addressed separately by the Committee in a later report.

- 7.104 It is apparent from the testimony of the Managing Director together with this Committee's examination of relevant Board papers of Western Power that the Media Release of 15 September 2011 was not approved by the Board of Western Power. This raises troubling questions about the extent to which senior management of Western Power views themselves as being directly accountable to Western Power's Board.
- 7.105 The Committee also asked the Managing Director for examples of disclosures made prior to 15 September 2011 in similar terms to those contained in the Media Release about the "*network effectively reaching the end of its useful and safe life*", and requiring corrective expenditure in the amount of \$1.222 billion over five years as part of a 20 year period of elevated investment. A selection of the examples provided in response to this request is reproduced in Appendix 3 to this Report.<sup>349</sup>
- 7.106 No example has been provided to this Committee by Western Power that contains the specificity of the disclosures it made in the Media Release of 15 September 2011.

*This raises troubling questions about the extent to which senior management of Western Power views themselves as being directly accountable to Western Power's Board.*

- 7.107 Several of the comments quoted by Western Power in response to this request for information were made by individuals who had no specialist knowledge of internal Western Power asset information at the time. Many of the comments relied upon by Western Power, did refer to poor asset condition, but these comments also stressed that corrective action was being taken at the relevant time. In addition, this Committee notes that, as all non-current assets wear out over time, reference to aging assets is not, of itself, necessarily indicative of an unsafe operating condition. Finally, written evidence, tendered to this Committee by the Managing Director of Western Power on the question of Western Power's disclosures in the 2011 Annual Report, throws considerable doubt over claims made by the Managing Director in a public hearing to the effect that that the state of the network was well known by the general community for many years.
- 7.108 The Committee is deeply concerned about the timing of the Media Release, coming barely a week after the signing of the 2010/2011 Annual Report.

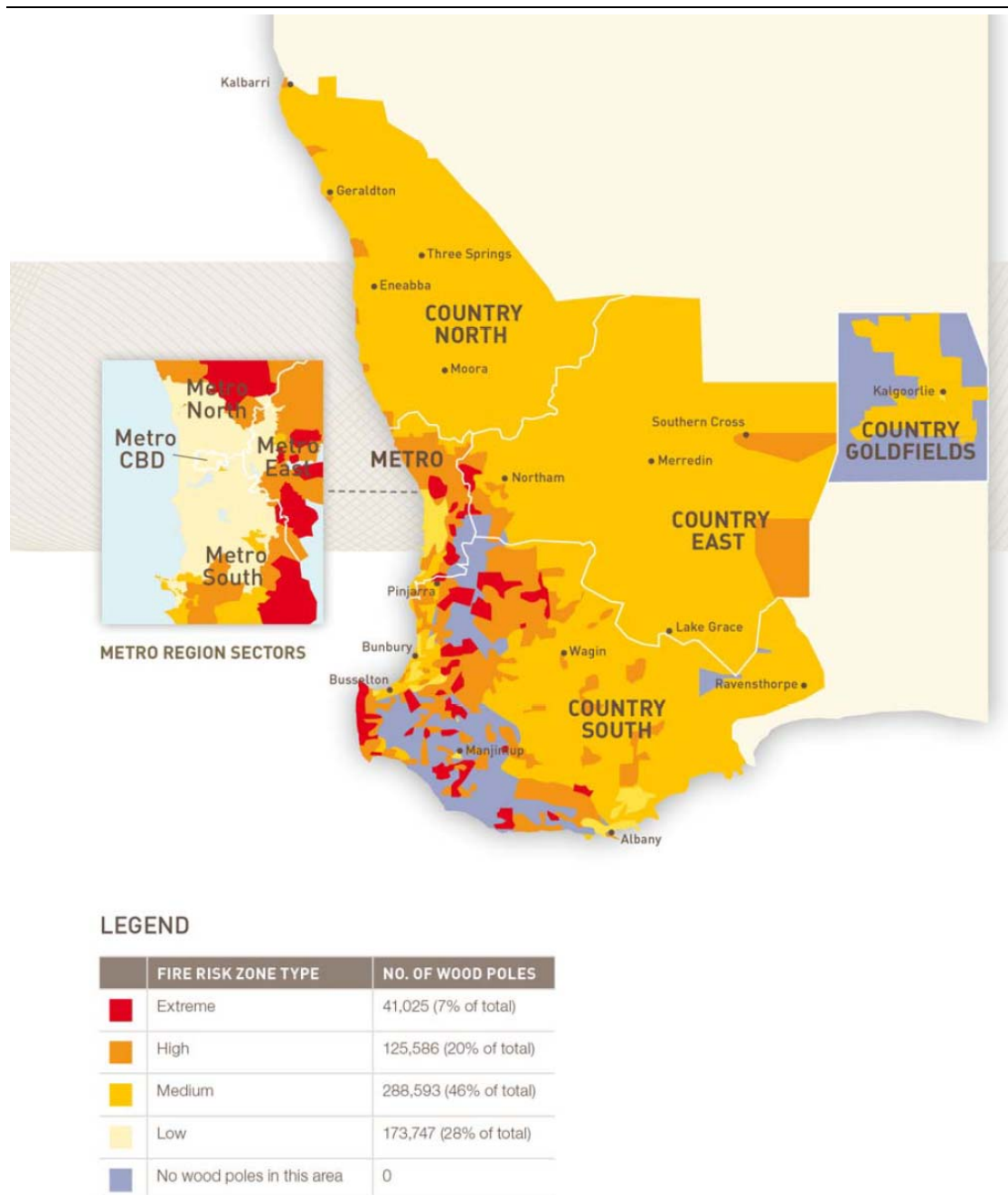
<sup>349</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "*Response to Questions on Notice*", 5 December 2011, pp5-10 & 13-14.

### **Western Power's AA3 Submission**

- 7.109 On 17 September 2011, Western Power delivered its AA3 submission to ERA. It was subsequently placed on the ERA website. In its AA3 submission to the ERA, Western Power proposes as follows:

*The inherent risk of electricity providing a source of ignition, coupled with Western Australia's hot, dry summer climate means that there is significant potential for bushfires, some of which may be attributed to network assets.*

*There are 176,000 wood poles located in 'extreme' or 'high' bushfire risk areas. A failed wood pole presents multiple hazards – it can harm people or damage property. Energised power lines contacting the ground can also cause electric shock and, in very specific conditions, cause fires. Figure 73 illustrates the fire risk zones across our network and the number of poles in each zone.*



**Figure 73: Number of wood poles by fire risk zone in the Western Power Network**

*Our objective is to replace or reinforce any unsafe pole before it falls. Wood poles are usually serviceable for 40 to 50 years. More than 200,000 of our 630,000 wood poles are over 40 years old. Our pole failure rate is the highest in Australia by a significant margin because of the overall condition of our poles.*

*We therefore propose to increase pole replacement and reinforcement rates during AA3. The plan is to replace or reinforce an average of*

*33,000 poles per year at a total cost of \$748 million. This is a 40% increase on the AA2 program, which in turn was double the AA1 program. The program will be prioritised to address the poles in the poorest condition and in the highest risk locations first.*

*... the above detail is of a type that should have been included in the 2010/2011 Annual Report.*

- 7.110 The Committee is of the view that the above detail is of a type that should have been included in the 2010/2011 Annual Report. The Committee notes that an equivalent level of detail was reflected in a Media Release that was issued by the Managing Director less than 10 days after the Auditor General signed off on Western Power's Annual Financial Statements for 2010/2011. This level of detail is not evident in any of the vague, and non-specific commentary surveyed at paragraph 7.63 above.
- 7.111 That less than 10 days separate the publication of the 2010/2011 Annual Report on the one hand, and the issuing of the relevant Media Release on the other, speaks eloquently of Western Power's corporate attitude to its formal Annual Reporting obligations.

#### **Western Power's Annual Report 2010/2011 Tabled**

- 7.112 On Thursday, 22 September 2011 Western Power's Annual Report was tabled in the Parliament without any additional explanation, qualification or elaboration. The Annual Report was not accompanied by a copy of the Media Release of 15 September 2011, which effectively rendered comments in the Annual Report, about Western Power "*Managing the Network*" redundant. The Committee is deeply troubled by such disregard for Parliamentary accountability by a government trading entity.
- 7.113 In early December 2011 Western Power responded to a question on notice from the Committee,<sup>350</sup> by referring to the above statement in connection with the absence of disclosures that would satisfy the forward-looking requirements of *Electricity Corporations Act 2005*, Sch 4 cl11(1)(e), which provides that:

*(1) The directors' report in respect of a corporation for a financial year must —*

...

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<sup>350</sup> Letter from Mr Doug Aberle, Managing Director, Western Power (DM#: 8848618), 5 December 2011, p12.

- (e) *refer to likely developments in the corporation's operations in future financial years and the expected results of those operations; and*

7.114 The Committee is unable to reconcile Western Power's reliance on the above exclusionary qualification for non disclosure, with its frequently repeated claim that full disclosure had occurred many times in the past. The following extract of proceedings from Western Power's second public hearing, referred to at paragraph 7.66 above, is just one example:<sup>351</sup>

**Hon ED DERMER:** *When was the first occasion that you referred to the usefulness and the safety of the network?*

**Mr Aberle:** *I cannot recall in those specific terms, but as I said, there are very many references to the network's age, to the fact that many poles are older than 40 years, the fact that we need significant investment to uplift it. That statement about it reaching the end of its safe and useful life is no different from any of those. It is describing the same state, which we move towards if we do not continue to ramp up our investment. It is as simple as that.*

*That less than 10 days separate the publication of the 2010/2011 Annual Report on the one hand, and the issuing of the relevant Media Release on the other, speaks eloquently of Western Power's corporate attitude to its formal Annual Reporting obligations.*

### **Western Power's 2011 the ERA Asset Management Report**

7.115 In October 2011, Western Power's 2011 Asset Management Report<sup>352</sup> was completed and submitted to the ERA by Western Power. Of relevance to the Committee's inquiries, Western Power's 2011 Asset Management Report made the following summary finding:<sup>353</sup>

*The investigation into all wood pole failures during the review period of 18 months and random sample audit of 400 wood pole inspections found that the pole failures had been correctly classified and*

<sup>351</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p8.

<sup>352</sup> Western Power (2011) [Asset Management System Review - Final Report](#). GHD Pty Ltd. October 2011.

<sup>353</sup> *Ibid*, piii.

*recorded, replacing poles based on condition followed the published procedures and assigned priorities were based on sound engineering principles which minimised the risk of pole failures. The replacement of poles was on schedule with the pole inspection program and inspections had been completed on all accessible poles within the past four years. The investigation could not verify that condemned poles had been replaced within the target timeframes. Additionally, the data on pole inspection backlogs was inconclusive in determining the size of the backlog as the reporting capability of the current management systems could not generate this information and Western Power was unable to provide evidence that poles had been replaced within the required timeframes.*

*"The investigation could not verify that condemned poles had been replaced within the target timeframes."*

- 7.116 The Committee notes that the above commentary is extracted from the findings of a “*Special Investigation*” that was stipulated by the ERA into a number of specific areas of concern. One potentially helpful outcome of the 2011 Asset Management Report in this respect, could have been in linking the special investigation findings explicitly to the relevant aspects of the 12 Asset Management Areas reviewed in the main body of the Report. Unfortunately, this linkage was not explicitly made by the reviewer. Accordingly, the Committee cannot make an informed judgment about the potential significance of the special investigation findings to the Report’s findings as a whole. Nevertheless, the Committee does note the following comments from the 2011 Asset Management Report relating to the issue of the wooden power pole inspection backlog:<sup>354</sup>

*The DFMS data extract provided evidence that 183,470 poles had been inspected during the 18 months of the audit period. As there is 630,000 distribution wood poles which are to be inspected once every four years, more than 248,250 poles ( $1.5 \times 630,000 / 4$ ) should have been inspected to reduce the backlog on poles inspections. Western Power staff also advised that all but 942 poles had been inspected in the last four years. The difference between the targets and that reported in DFMS was discussed with Western Power at follow up interviews, where staff advised that not all inspections completed during review period had been recorded in DFMS because of Quality Control issues with the field captured data and the start-up issues with the new electronic reporting process. Western Power provided*

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<sup>354</sup>

*Ibid*, p49.



*data from the two pole inspection contractors showing that 164,196 poles had been inspected between Nov 09 and Jun 10 and 126,122 poles between Jul 10 and Apr 11. The source data is the monthly invoice claims for the two network contractors, which are independently checked by Western Power before payments are processed. The total number of inspections reportedly completed by the contractors during the review period of 290,318 exceeds the target numbers needed to reduce a backlog. However, the difference between the contractors reported numbers of inspections (290,318) and that recorded in DFMS (183,470) indicated that 106,848 pole reports had not been loaded to DFMS. This is a significant issue as 37% of inspections were not recorded within the distribution asset management system (DFMS) during the review period. The number is far higher than that expected from a data entry or quality control problem. A third source of data (Wood Pole Inspection Tracker (DM#7582098 and DM#6321838) shows that 258,565 poles were inspected during the audit period.*

*"... not all inspections completed during review period had been recorded in DFMS because of Quality Control issues with the field captured data and the start-up issues with the new electronic reporting process."*

- 7.117 The Committee notes from the foregoing extract that three official Western Power sources appear to have provided the 2011 Asset Management Report reviewer with three different wooden power pole inspection figures for the same period. The variance between the largest and smallest of these figures was in the order of 37%. The Committee further notes that, on the basis of this assessment, the reviewer expressed the following view:<sup>355</sup>

*While Western Power advised that they had inspected all but 946 inaccessible wood poles over the past four years, the evidence did not support this claim and indicates that the backlog of inspections may be increasing. Because of the difference in pole inspection numbers from the two sources, the AMSR team did not have confidence in the actual number based on the differences in inspection numbers between the reporting systems.*

<sup>355</sup> Western Power (2011) [\*Asset Management System Review - Final Report\*](#). GHD Pty Ltd. October 2011, p50.

- 7.118 When the above section of Western Power's 2011 Asset Management Report was raised with Western Power's senior management at a public hearing - particularly with respect to the reported variance in records, the following exchange occurred:<sup>356</sup>

**The CHAIRMAN:** ...

*Can we go to exhibit W4? This is an extract from Western Power's most recent asset management system review prepared by GHD, and you have it on the screen. I will give you a few moments to look at it.*

**Mr Aberle:** *We have not seen that. We are happy to take it on notice. One comment to make, though, is that there is a difference between doing inspections and actually entering the data into the DFMS database. Some of the substantial expenditure that we are in the process of making now is enabling the mobile workforce to instantaneously enter data, which is all targeted at closing the gap between doing an inspection and actually getting the data into the system. But we will take that on notice.*

*... this report was submitted to the ERA by Western Power in late October 2011, under cover of a letter signed by the Managing Director himself.*

**The CHAIRMAN:** *Our question to you is that the consultant stated it did not have confidence in the actual number of wooden poles that Western Power claims to have inspected in the previous 18 months. This is current information.*

**Mr Aberle:** *As I said, we will take a response to that on notice, if we may.*

**The CHAIRMAN:** *Okay; that is not a problem. The next question is: was this not because it had received three different figures from Western Power, with the variance between the highest and lowest of these figures being in the region of 37 per cent?*

**Mr Aberle:** *That is what they articulate. But, as I said, we will need to take a response to that on notice.*

- 7.119 The Committee was surprised to learn that the Managing Director had not seen GHD's Western Power 2011 Asset Management Report, given that this report was submitted

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<sup>356</sup>

Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 9 November 2011, p6.

to the ERA by Western Power in late October 2011, under cover of a letter signed by the Managing Director himself. This letter indicated that the ERA should contact Western Power's Manager, Risk and Compliance, if there were any questions arising from the Report.

- 7.120 On 31 October 2011, an officer of the ERA contacted Western Power's nominated contact person, the Manager, Risk and Compliance with a query about part 4.3.1 of the Western Power 2011 Asset Management Report. This query related to the inconsistencies, reported by GHD in Western Power's wooden power pole inspection figures, that were extracted in the preceding paragraphs. Western Power's Manager, Risk and Compliance then advised the relevant ERA officer to contact GHD directly. Subsequently, Western Power contacted GHD and contested some of the information in part 4.3.1 of the document. As a result, on 15 November 2011, GHD issued a correcting statement to Western Power, including an amended part 4.3.1 of the original Western Power 2011 Asset Management Report. This amending letter was thereafter lodged with the ERA under signature of the Managing Director on 21 November 2011.<sup>357</sup> As a result of these amendments, the variance in wooden power pole inspection figures revealed by different record systems within Western Power was reduced from 37% to 29%. The Committee notes that this is still a substantial variance by any reckoning. Matters relevant to these events will be addressed in a later report.

*These subsequent disclosures mean that the Managing Director's unqualified assertion in both the 2011 Legislative Council Estimates hearing ... and before this Committee ... that the wooden power pole inspection backlog is down to a functional minimum cannot be verified.*

- 7.121 The Committee notes that, as discussed at paragraph 7.115 above, GHD, in Western Power's most recent Asset Management System review, found that it could not have confidence in Western Power's wood pole inspection statistics. This was because GHD had received two different figures from Western Power on the number of inspections which had taken place, and these numbers varied by 29%. The GHD report that was forwarded by Western Power to the ERA referred to three different figures, but subsequently GHD agreed to remove reference to one of these figures after Western Power raised objections to it. Unfortunately, Western Power did not check the GHD report thoroughly prior to submitting it to the ERA. These subsequent disclosures mean that the Managing Director's unqualified assertion in both the 2011

<sup>357</sup> Letter from Western Power to the ERA, (2011) [\*Asset Management Report - Amendment to Part 4.3.1\*](#), 23 November 2011.

Legislative Council Estimates hearing (referred to in paragraph 7.52 above), and before this Committee<sup>358</sup> (after the date on which the Managing Director had sent the GHD report to the ERA under his personal signature), that the wooden power pole inspection backlog is down to a functional minimum cannot be verified. The basis, on which the Managing Director's unqualified assertions were made, is therefore uncertain.

- 7.122 The Committee notes that the issue of wooden power pole inspection backlogs was first raised by EnergySafety in its 2006 Audit.<sup>359</sup> In particular, the Committee notes the concern expressed by EnergySafety in 2006 that:<sup>360</sup>

*The consistent conclusion from both sets of data is that Western Power has not maintained the 4-year pole inspection programme, although the magnitude of the backlog is not certain.*

*... in September 2011, EnergySafety advised that Western Power had not developed or implemented an adequate plan in response to the 2009 Inspector's Order.*

- 7.123 This Committee notes that, while EnergySafety had, by 2009, reported a significant reduction in the wooden power pole inspection backlog as a result of a new contract-based inspection regime, the then "*magnitude of the backlog is understood to be approximately 120,000 poles, a substantial reduction on the levels identified in the 2006 Audit.*"<sup>361</sup> On the basis of Western Power's then record in the management of its wooden power pole asset base, EnergySafety issued the 2009 Inspector's Order, requiring that a detailed wooden power pole management plan be developed and implemented by 1 February 2010. In evidence to the Committee in September 2011, EnergySafety advised that Western Power had not developed or implemented an adequate plan in response to the 2009 Inspector's Order.<sup>362</sup> The Committee has also received into evidence a letter from EnergySafety's Director, Electricity Compliance to Western Power's General Manager, Networks dated 5 December 2011, which points out clearly a significant number of deficiencies of Western Power's response to

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<sup>358</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 9 November 2011, p16.

<sup>359</sup> Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p25.

<sup>360</sup> *Ibid*, p26.

<sup>361</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#). May 2009, p34.

<sup>362</sup> Mr Ken Bowron, Executive Director, EnergySafety, *Transcript of Evidence*, 21 September 2011, p25.

EnergySafety's 2009 Inspector's Order to date.<sup>363</sup> The relevant portion of this letter restates the fact that the 2009 Inspector's Order required that Western Power; *"By 1 February 2010 implement the Wood Pole Management Plan"*. The letter thereafter advises Western Power that; *"Acceptable Plans have not been submitted to Energy Safety at the date of this letter."*<sup>364</sup>

7.124 Of further concern to the Committee in this respect is that, although EnergySafety has repeatedly expressed concerns regarding Western Power's wooden power pole inspection backlog since the 2006 Audit, over the previous three review periods since that time, none of Western Power's Asset Management Reviewers has sought further information, or an update on progress from the perspective of EnergySafety. This was the case even where EnergySafety had expressly taken issue with some of the central findings of one of the Western Power's Asset Management Reviewers' reports. Had any of these reviewers made a basic level of inquiry of EnergySafety, their assessments would have been more re-assuring. In particular, the Committee notes that the continued uncritical reliance of Western Power's Asset Management Reviewers upon an application of Western Power's wooden power pole inspection criteria does not, of itself, provide assurance of the operational safety of its wooden power pole assets. EnergySafety's continued concerns about the accuracy and benignity of Western Power's inspection methodology means that this remains something of an open question.

7.125 This question has been expressly raised by EnergySafety with the ERA in the context of Western Power's 2011 Asset Management Report. The following observations are taken from a formal communication between these agencies, and encapsulates EnergySafety's ongoing concern about the quality of the data stored on Western Power's asset management systems, as opposed to the functionality of the systems themselves.<sup>365</sup>

*"Western Power has yet to demonstrate that its measures of good wood are accurate and can be relied upon to determine the safety of the wood poles, despite citing the elaborate administrative system used for data recording and analysis."*

<sup>363</sup> Letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power *"Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011"*, (A2845673) 5 December 2011, pp4-6.

<sup>364</sup> *Ibid*, p6.

<sup>365</sup> Letter from Mr Rob Thornton, Principal Engineer, Electricity Supply, EnergySafety to Mr Harry Hilton, Analyst, Economic Regulation Authority *"Western Power - Asset Management System Review - Final Report by GHD to the ERA (October 2011)"*, 7 November 2011, p1.

*As a general comment, the audit examines processes, not whether the data collected recorded and analysed actually provide the rigor needed to verify, with adequate confidence, the probability of failure and to select satisfactory mitigation measures. The data recording and analysis systems examined in the report concerning pole management all rely on estimates of ‘good wood’ made during routine pole inspections. Western Power has yet to demonstrate that its measures of good wood are accurate and can be relied upon to determine the safety of the wood poles, despite citing the elaborate administrative system used for data recording and analysis.*

- 7.126 In the absence of a fully justifiable serviceability criterion for its wooden power poles, it is possible that Western Power’s wooden power pole inspection and replacement plan could be defended by reference to industry benchmarks and relevant standards. Such standards invariably take account of the age of wooden power pole installations. Given that Western Power is unable to determine the actual age of the older half of its wooden power pole installations with any accuracy, this methodology is highly problematic for Western Power, as Western Power has itself acknowledged”.<sup>366</sup>

*These types of inconsistencies and peaks in Western Power’s information system make it difficult to analyse and hence, to formulate an asset management strategy.*

- 7.127 The question must be asked; “If a wooden power pole with an installation date of 1970 experienced an unassisted failure with a consequent loss to life or property, on what basis can the pre-failure serviceability of the wooden power pole be asserted?” If it were to be so asserted on the basis of the age profile of the pole matching industry standards and benchmarks, the assertion may be open to critique on the basis of reliance upon a nominal, as opposed to an actual, installation date. If pre-failure serviceability were to be asserted on the basis of the pre-failure inspection regime, the assertion may be open to critique on the basis of the application of flawed serviceability criteria.

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<sup>366</sup> Western Power (2009) *Distribution Asset Management Plan for 2009/10*. (DM#3273896) 1 October 2009, p30.

## 8 CURRENT STATUS

- 8.1 From the foregoing discussion, it will be appreciated that Western Power's wooden power pole asset management systems, processes and practices have progressed in a number of respects since EnergySafety's 2006 Audit. The extent of this progress, and the current status of these crucial aspects of Western Power's distribution network is discussed in the following paragraphs.

### Wooden Power Pole Line and Reinforcement Findings

*"We predominantly look at other issues, other than just the pole; there is the pole-top hardware, the condition of the conductors, and we have concerns about those as well."*

- 8.2 At a hearing on 21 September 2011, the Committee sought clarification from officers of EnergySafety concerning progress made on this safety issue subsequent to the 2006 Audit, the 2008 Audit and the 2009 Inspector's Order. The following evidence was obtained in response to questions.<sup>367</sup>

**Mr Bowron:** *And it is the assumption that if it has got a stay, it is probably safe because it has two pieces of wood.*

**Hon JIM CHOWN:** *We have just discussed that. The stay may not be safe.*

**Mr Bowron:** *Exactly. We have found an incident in which the pole had two stays on it and it failed at the same time.*

**Hon JIM CHOWN:** *Stayed poles should also be looked at pre-2008.*

**Mr Thornton:** *They have actually been tested. They can do the calculation on the strength of the pole—we have not seen that—because they need the forces on the pole, and some of those forces are applied by the stay, and on all the figures we have calculated 180 000 poles would need to be replaced, but if you reinforce them there are only 7 000 poles. That has come from pro-rataing. We assume the poles are all installed at the same time and in the same conditions. But they could actually do the calculations, because all the stay is doing is counteracting for the outer-line forces. The in-line forces*

<sup>367</sup> Mr Ken Bowron, Executive Director, and Mr Rob Thornton, Principal Engineer, Electricity Supply EnergySafety, *Transcript of Evidence*, 21 September 2011, p26.

*will still be pretty much the same. They could do a run and have an indicative serviceability index for all those stayed poles, but they chose not to on the excuse, "We don't have the data."*

**Hon JIM CHOWN:** *Just while you are talking about poles. We have been concentrating all morning on the actual pole itself. The question I actually asked is: the lines that have been in place for 30 or 40 years, is there any indication that they are overloaded? Is there any effect from a safety point of view —*

**Mr Thornton:** *Not so much overloaded as corroded.*

**Mr Bowron:** *We have not been looking at the loads that they are carrying— that is, the current that has been going in there from the point of view of reliability and backup and all those questions. We predominantly look at other issues, other than just the pole; there is the pole-top hardware, the condition of the conductors, and we have concerns about those as well.*

**The CHAIRMAN:** *The age of those conductors?*

**Mr Bowron:** *Absolutely. Conductor failure is probably the next biggest issue.*

**Mr Thornton:** *We have two audits running at the moment, pole-top fires and clashing conductors. Again, it has been like drawing teeth to try to get any data out of Western Power. But our next audit, once we complete those, will be conductors.*

- 8.3 In response to a request from this Committee, Western Power advised that it has recorded 72 different wooden power pole reinforcement systems in existence in its distribution network.<sup>368</sup> As EnergySafety observed in its 2006 Audit, none of the reinforcement methodologies evident in Western Power's distribution network prior to 2008 met the relevant industry design standards (see paragraph 3.9 above). It follows that non-compliant wooden power pole reinforcement applications are both endemic to Western Power's distribution network, and represent an urgent and important asset management challenge to Western Power, and a potential risk factor to the general public and Western Power line maintenance staff.
- 8.4 EnergySafety provided its formal response to Western Power's "Wood Pole Management Plan 2011-17" and "Rural Wood Pole Safety Improvement Plan 2011"

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<sup>368</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "Response to Questions on Notice", 5 December 2011, p33.



on 5 December 2011.<sup>369</sup> The response includes EnergySafety's progressive assessment of Western Power's performance in response to EnergySafety's 2009 Inspector's Order. It will be recalled that the 2009 Inspector's Order required certain action with respect to line and reinforcement maintenance activities. On 5 December 2011, EnergySafety assessed Western Power's progress with respect to the required actions is discussed in the following paragraphs.

*"The Plans do not include Modified Wood Pole Strength Assessment Criteria and figures for pole strengths at one metre above ground, essential for sound decisions to reinforce"*

- 8.5 Relevant extracts from the relevant correspondence, outlining Western Power's progress with respect to line and reinforcement issues are as follows.<sup>370</sup>

*"The Plans do not include Modified Wood Pole Strength Assessment Criteria and figures for pole strengths at one metre above ground, essential for sound decisions to reinforce [Items 2.1, 2.3, and 2.4]."*<sup>371</sup>

*"[Item 3.1(b)] has not been completed. The Plans mention that Western Power is conducting a review of existing pole-base reinforcements but include no figures setting out the scope of the problems arising from inadequate reinforcing."*

*"The Plans do not include comprehensive assessments of stay design adequacy or the current state of stay's now in service. In the rural system, many stays are likely to be very old and may have been damaged or be badly deteriorated. No information has been presented about the number of stay poles present in the 117,000 supported poles in the rural system. These stay poles have not been separately categorised and it is not clear how many have been tested using the 'enhanced' inspection procedure."*<sup>372</sup>

*"The Plans do not provide any data about the condition of pole stays in the rural network. Western Power has indicated that stayed poles and conductor-supported poles present less danger of falling over compared with their in-line, unsupported counterparts. The failure*

<sup>369</sup> Letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power *"Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011"*, (A2845673) 5 December 2011.

<sup>370</sup> *Id.*

<sup>371</sup> *Ibid* at 2.

<sup>372</sup> *Ibid* at 3. [Parenthetical inserted].

*risk depends upon stay soundness and supported poles can be subject to cascade failure.*<sup>373</sup>

*No tests or investigations have been conducted by Western Power on reinforcing methodologies*

8.6 No tests or investigations have been conducted by Western Power on reinforcing methodologies, as was required at Item 4.2(c)(ii) of the 2009 Inspector's Order.<sup>374</sup>

8.7 Item 4.2(e) of the 2009 Inspector's Order stipulated that Western Power's "*Wood Pole Management Plan*" was required to:<sup>375</sup>

*Detail the management Systems and processes that will be used to identify, reinforce and replace the poles that do not meet Western Power's serviceability criteria and comply with the Electricity (Supply Standards and System Safety) Regulations 2001 and related technical standards;*

EnergySafety advised Western Power that this requirement "*has not been carried out*".

8.8 The following required steps also have not been completed to EnergySafety's satisfaction.<sup>376</sup>

*f) Detail for the next year and each of the following years of the pole inspection cycle each of the following:*

*...*

*iii) The forecast pole replacement and reinforcement activity; and*

*iv) The poles not reinforced or replaced at the end of each of each planning period to be carried forward into the next period;*

8.9 Item 5.1 of the 2009 Inspector's Order required Western Power's "*Rural Wood Pole Technical Engineering Review*" to be provided to EnergySafety by 31 December 2009. This review was required to include:<sup>377</sup>

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<sup>373</sup> *Ibid* at 4.

<sup>374</sup> *Ibid* at 5.

<sup>375</sup> *Id.*

<sup>376</sup> *Id.*

... the rural wood pole strengths based on the following:

...

- b) Current data of the external good wood at the top of any pole-base reinforcement installed;
- c) Current data of internal good wood above and below the ground line, and at the top of any pole-base reinforcement installed; and

“Results from Western Power’s testing to failure of 50 poles in May 2010 indicated strongly that the then existing pole inspection data should not be relied upon.”

EnergySafety’s assessment of Western Power’s progress on this requirement was as follows:<sup>378</sup>

*Western Power carried out the review but it relied on pole inspection data discredited by Energy Safety’s 2006 audit and 2008 audit review, which identified serious lapses in Western Power’s pole inspection system. ... Results from Western Power’s testing to failure of 50 poles in May 2010 indicated strongly that the then existing pole inspection data should not be relied upon.*

EnergySafety also noted that Western Power’s plans “do not include any information that Item 5.3 has been carried out.” This Item required that Western Power:<sup>379</sup>

*By 31 January 2010 conduct an Assessment of the Failure Risk of Rural Wood Poles based on the following:*

...

- b) *The effectiveness of pole-bas reinforcement installed;*
- c) *the lateral support for the poles and conductors derived from the conductors and stays attached to the pole transverse to the power line;*

<sup>377</sup> *Ibid* at 6.

<sup>378</sup> *Id.*

<sup>379</sup> *Id.*

- 8.10 Part 6 of the 2009 Inspector's Order required Western Power, at Item 6.1, to develop and implement a Rural Wood Pole Safety Improvement Plan by 31 January 2010; and, at Item 6.2, to review and amend the Rural Wood Pole Safety Improvement Plan. In EnergySafety's opinion, Western Power's Plans do not address any of these Items.

*Western Power's response to concerns raised by EnergySafety over five years, regarding distribution wooden power pole line and reinforcement systems, practices and processes, has been inadequate and/or ineffectual.*

- 8.11 On the basis of the foregoing discussion, this Committee finds that Western Power's response to concerns raised by EnergySafety over five years, regarding distribution wooden power pole line and reinforcement systems, practices and processes, has been inadequate and/or ineffectual.
- 8.12 This Committee reviewed electricity network asset management practices in Queensland, New South Wales and Victoria. During the course of those inquiries, the Committee noted adverse comments by several network operators regarding the use of CCA-treated pine poles. Given that Western Power's principal stock of replacement wooden power poles is CCA-treated pine poles, this was a matter about which the Committee sought assurance from the safety regulator. When this issue was addressed with EnergySafety in evidence before the Committee, the following exchange occurred:<sup>380</sup>

**Mr Bowron:** *I think the issue I have got there is there are lots of options and it is up to the network operator to work out the costs and the strengths and weaknesses of them. All of them have safety issues and all of them have maintenance issues. Wood poles appear to be managed quite well in a number of locations on the east coast within what appear to be much safer failure rates than what Western Power has.*

**Hon JON FORD:** *Except they are hardwood poles, not softwood poles.*

**Mr Bowron:** *I think the issue is the lack of the understanding of the wood. That has always been the issue. It is the technical understanding. It is not an electrical engineering problem. This is a civil, structural, wood issue that we have not seen being understood.*

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<sup>380</sup> Mr Ken Bowron, Executive Director, and Mr Rob Thornton, Principal Engineer, Electricity Supply EnergySafety, *Transcript of Evidence*, Wednesday, 21 September 2011, p20.

*Any of them are good if they are managed properly. The cost effectiveness of that is up to the individual network operator.*

...

**Mr Thornton:** *What I will say is I think Western Power have got going forward right. The properly treated CCA pine poles looks like a very robust process. We have been involved in that to some large degree. The audit itself found that Western Power was not auditing that treatment of the poles and the delivery and the quality control, but fortunately Koppers had such a high regard for their own reputation, they were doing it in spades. So, it is a very robust process. I have yet to check and see that it has actually been implemented, but they are looking at every new pole, before they CCA treat it, they actually have a sonic tester that will estimate the time it takes a soundwave to travel up and down the pole. They can actually find internal flaws. If there are a lot of small internal flaws, it will actually condemn the pole—it looks weak, even though it might be quite strong. So it over-condemns, but at that stage of the process, they just tip it off the line and it goes around the back to the west beam factory for building lumber. So there is absolutely no cost in making sure you have only got high quality poles.*

**Mr Bowron:** *So that is a higher quality going in, but if there is not rigorous testing and analysis of that, in 10 to 15 years you will have the same problem you have with jarrah. These people will not understand it and what makes it fail.*

... the Committee noted adverse comments by several network operators regarding the use of CCA treated pine poles.

- 8.13 In response to a question on notice on this question, Western Power has advised the Committee as follows:<sup>381</sup>

*The species of pine power pole in use in Western Power is Pinus Radiata. Western Power has been made aware of alternate species of pine that have been trialled in other parts of Australia and New Zealand for power poles that have not performed well.*

<sup>381</sup> Letter from Mr Doug Aberle, Managing Director, Western Power “Response to Questions on Notice”, 5 December 2011, 5 December, pp19 & 20.

*A significant determinant of the whole of life cost of a pole is the cost of an effective earthing system to mitigate hazardous voltages which may lead to electric shock as described in the Distribution Poles for the Future Report which was provided previously to the Committee. This represents a significant difference between the historical design of the distribution network in use in Western Australia as compared with other parts of Australia, which allows for greater use of conductive poles, and a much larger cost to put in place.*

*"More recently, other network operators have expressed significant interest in the use of pine power poles in Western Australia"*

*More recently, other network operators have expressed significant interest in the use of pine power poles in Western Australia, given the performance characteristics and their own limitations on access to timber stocks.*

...

*The table below outlines the lifetime costs for different pole types and was extracted from a study commissioned by the Energy Networks Association (ENA) and funded by the ENA and the Queensland Government. In the table the costs have been normalised against the cost of, for example, a spun concrete pole versus a softwood pole.*

**Table: Normalised costs for an 11m 8kN and a 12.5m 8kN pole for various pole materials.**

POLE TYPE	BARE POLE COST		INSTALLED COST		LIFETIME COST	
	11m 8kN	12.5m 8kN	11m 8kN	12.5m 8kN	11m 8kN	12.5m 8kN
Softwood When WA pine prices used.	<1	<1	<1	<1	<1	<1
Concrete Spun	3.88	3.60	2.50	2.71	1.93	2.13
Steel	3.24	3.15	2.20	2.40	1.94	2.15

## Wooden Power Pole Failure Rates

- 8.14 The 2009 Inspector's Order required Western Power to detail "*the outcomes from the post-mortem investigations of all unassisted failures*".<sup>382</sup> Senior officers of EnergySafety provided the following evidence concerning progress made on this aspect of the 2009 Inspector's Order at a hearing on 21 September 2011.<sup>383</sup>

*"... we still have concerns about the quality of the post-mortem investigations ..."*

**Mr Bowron:** *Well, we still have concerns about the quality of the post-mortem investigations, as you have already pointed out, of those poles; they have not been analysed.*

**Mr Thornton:** *They just do not have the facilities given the number of poles that fail, and to date, it has always been media led: "Well we've got to hide behind the storm, therefore don't have to bother about those." In fact, from a practical point of view, those storms are getting rid of the weak poles.*

**Mr Bunko:** *What we discovered at the beginning of this year, probably in April or May, was that the only time they were doing post-mortem investigations was in the incidents that we knew about—basically the ones they had to tell us. Certainly where they had a storm where we believe they could learn, like the 29, 30 January storms, where they told us they had 350 poles fail, they had not done any post-mortem investigations of that and what they are doing regarding that investigation is still outstanding.*

- 8.15 On 5 December 2011, EnergySafety made the following observation with respect to Western Power's progress with respect to this requirement of the 2009 Inspector's Order:<sup>384</sup>

*The Plans do not show any details of Western Power's Investigations following un-assisted pole failures. It is not clear whether or not*

<sup>382</sup> Department of Commerce, EnergySafety, (2009) [\*Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009\*](#), 29 September 2009, p8.

<sup>383</sup> Mr Ken Bowron, Executive Director, Mr Michael Bunko, Acting Director, Electricity Compliance and Mr Rob Thornton, Principal Engineer, Electricity Supply EnergySafety, *Transcript of Evidence*, 21 September 2011, p17.

<sup>384</sup> Letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power "*Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011*", (A2845673) 5 December 2011, p4.

*Western Power in fact carries out detailed investigations and prepares reports of all its un-assisted pole failures.*

*Western Power's response to this Committee indicated that no forensic testing occurred on any wooden power poles prior to September 2010 ...*

8.16 This issue was raised directly by the Committee with Western Power as a question on notice subsequent to the public hearing on 21 November 2011. The question put to Western Power at that time requested details of wooden power poles that were forensically tested post-failure during the period 2006-2011. A copy of the forensic test results from the 2010 wooden power pole failures was also requested. Western Power's response to this Committee indicated that no forensic testing occurred on any wooden power poles prior to September 2010 (see paragraph 5.108 above).<sup>385</sup> Western Power also advised this Committee that 22 forensic examinations occurred in 2010, and provided copies of the relevant test reports. The Committee was concerned to discover, as recently as 7 December 2011 that Western Power has not provided any of these forensic test results to EnergySafety.<sup>386</sup>

8.17 On reviewing the 22 test reports, the Committee notes the following:

- In 19 cases, the failed poles had no "Serviceability Index" calculation figure recorded in the DFMS asset management system (86%). This figure is the basis of all reinforcement and replacement decisions;
- In 16 cases, the most recent inspection records were dated prior to the implementation of the current inspection arrangements. In all such cases, the most recent inspection did not occur within a 4 year inspection cycle (72%);
- In six cases there was either no inspection data recorded for the pole, or the pole had never been inspected (27%);
- The examiner reported that Western Power's own evidence handling protocols were not followed in five cases (22%);
- In five cases, the poles failed within one month after their most recent inspection (22%); in one case the pole failed within three months after its most recent inspection (7%) in none of these cases was the pole identified as being suitable for reinforcement or replacement;

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<sup>385</sup> Letter from Mr Doug Aberle, Managing Director, Western Power (Ref: 62297). 16 December 2011, p2.

<sup>386</sup> Email message from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety. 7 December 2011.



- In three cases, the failed poles had never been entered on the Western Power DFMS information system (13%);
- In two cases inspection records indicated that the poles in question had grown new good wood over the three year period between inspections (4%); and
- In one case the pole had actually been nominated for replacement within one year as far back as 2005 (4%). This was not actioned. Despite this egregious system failure, Western Power's internal recommendation for action flowing from the failure, focussed exclusively on the effectiveness of the 2010 inspection.

*... the foregoing summary of the results of Western Power's forensic testing of 22 wooden power poles which had failed in late 2010 is deeply troubling.*

8.18 It will be appreciated that the foregoing summary of the results of Western Power's forensic testing of 22 wooden power poles which had failed in late 2010 is severely troubling. It indicates that there are significant problems with the implementation of Western Power's current wooden power pole inspection regime. Until these problems are proven to have been addressed, this Committee finds that it is difficult to see how Western Power can expect to address its "*worst-in-class*" status within Australia with respect to unassisted wooden power pole failures.

8.19 In answer to a question on notice following a 21 November 2011 public hearing, Western Power's response to this Committee stated that it also "*included forensic examination reports for 26 poles investigated in 2011.*"<sup>387</sup> However, reference by this Committee to the document that Western Power described as "*forensic examination reports for 26 poles investigated in 2011*" under the heading "*General Conclusions*" reveals the following statement:<sup>388</sup>

*The following conclusions focus on the observations that were carried out on the failed poles in general terms only. Unfortunately there was a lack of evidence required for a thorough assessment of the cause of failure due to the incomplete and inadequate physical samples provided and the amount/accuracy of the data available for the failed pole.*

8.20 It is acknowledged that such a document may be of utility to Western Power as part of addressing its wooden power pole asset management challenge. However, it cannot

<sup>387</sup> Letter from Mr Doug Aberle, Managing Director, Western Power (Ref: 62297), 16 December 2011, p4.

<sup>388</sup> Alliance Power & Data (2011) *Failed Pole Evidence Investigation and Review*. 16 August 2011, prepared for Western Power, p68.

accurately be characterised as “*forensic examination reports for 26 poles*”. This raises questions about Western Power’s accountability to a committee of the Parliament that will be addressed in a later report. However, this also indicates that Western Power’s commitment to the task of forensically analysing all wooden power pole failures may have waned after the brief three month period during which it was actually occurring.

- 8.21 It is also troubling to note that, after 27% of the 2010 forensic wooden power pole failure assessments specifically drew attention to Western Power not following its own evidence handling protocols, Western Power’s August 2011 reviewer also expressly qualified its very general observations by specific reference to the poor quality of available evidence. This suggests that important feedback may not have been harnessed to refine internal systems.

*Western Power’s commitment to the task of forensically analysing all wooden power pole failures may have waned after the brief three month period during which it was actually occurring.*

- 8.22 Western Power has also advised this Committee that forensic examinations in late 2010 were only “*conducted on poles where the failure cause was not evident (ie unassisted pole failures) where evidence was available for analysis.*”<sup>389</sup> The obvious question which arises from such a response is; “*Evident to whom, and on what basis?*” It is apparent from this response that line maintenance crews perform some form of initial assessment of wooden power pole failures and, only where line maintenance crew members believe that the cause of the failure is not evident, these failures are treated as potential unassisted failures warranting further forensic assessment. No information has been provided by Western Power to explain or justify such informal screening processes. This in turn raises questions about the validity of Western Power’s reported rates of wooden power pole unassisted failure. In addition, a valuable opportunity to use all failed poles to verify wooden power pole inspection data is lost.

- 8.23 The Committee is also concerned that forensic examination reports for in excess of 290 wooden power poles which failed in January-February 2011 are still unavailable. The level of resourcing and operational priority allocated to this task within Western Power is not known to this Committee. The time delay for these assessments is not compatible with the completion times of forensic assessments conducted in late September 2010.

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<sup>389</sup> Letter from Mr Doug Aberle, Managing Director, Western Power “*Response to Questions on Notice*”, 16 December 2011, p3.

- 8.24 Following a 21 November 2011 public hearing, the Committee addressed the following question on notice to Western Power:

EnergySafety has advised the Committee that that there have been at least 350 unassisted pole failures per annum over the last 4 years. Does Western Power accept this assessment? If not - on what basis does Western Power reject EnergySafety's assessment?

- 8.25 In response to this question on notice, Western Power made the following unqualified statement:<sup>390</sup>

*No, Western Power does not agree with EnergySafety's assessment. Western Power is not aware of the basis of Energy Safety's assessment.*

*Western Power's demonstrated corporate cultural characteristic of being unwilling, or unable, to engage meaningfully with facts ...*

- 8.26 EnergySafety has advised this Committee that EnergySafety's estimate of "350 unassisted pole failures per annum over the last 4 years", was based on "Western Power's Network Operations Control Centre records, reported quarterly to EnergySafety".<sup>391</sup> It follows therefore, that Western Power's answer to a question taken on notice from this Committee was either deliberately, or carelessly, misleading. This matter will be addressed separately in a later report.
- 8.27 It will be appreciated that the foregoing discussion of Western Power's actions in response to its "worst-in-class" status with respect to its wooden power pole failure rates reveals a state of affairs which is less than satisfactory. Indeed, Western Power appears to have adopted the position that the problem has more to do with how EnergySafety defines "unassisted wooden power pole failures", than as the predictable result of prolonged, and systemic corporate asset management failures. Western Power's demonstrated corporate cultural characteristic of being unwilling, or unable, to engage meaningfully with facts will be addressed in more detail in a later report.

#### *Pole Condemnation Rates*

- 8.28 EnergySafety has advised this Committee that it has rejected the findings of the most recent controlled testing to destruction, of network wooden power poles by Western

<sup>390</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "Response to Questions on Notice", 5 December 2011, p24.

<sup>391</sup> Letter from Mr Rob Thornton, Principal Engineer, Electricity Supply, EnergySafety to Mr Harry Hilton, Analyst, Economic Regulation Authority "Western Power - Asset Management System Review - Final Report by GHD to the ERA (October 2011)". 7 November 2011, p3.

Power, to determine the effectiveness of its “*enhanced*” sound-dig-and-drill wooden power pole assessment methodology. This raises troubling questions about Western Power’s wooden power pole condemnation rates some five and a half years after EnergySafety published its first 2006 Audit report. As explained in official communications between EnergySafety and the ERA in November 2011:<sup>392</sup>

*Recent destructive pole testing confirms the conclusion from similar tests in May 2010 that the serviceability index based on the current pole inspection method will miss 20% of unsafe poles, while over condemning 40% of safe poles.*

“... the serviceability index based on the current pole inspection method will miss 20% of unsafe poles, while over condemning 40% of safe poles.”

- 8.29 In addition, elsewhere in the same document, EnergySafety refers to GHD’s 2011 Western Power Asset Management System report.<sup>393</sup> The section of the GHD report which is referred to in this context by EnergySafety is section 4.3.1,<sup>394</sup> which was referred to above at paragraph 7.120. This section of the GHD report considers the findings of a sample-based audit of Western Power’s wooden power pole inspection program. EnergySafety’s assessment of GHD’s findings were as follows:<sup>395</sup>

*From a random sample (intended to give 95% confidence) of “394 pole inspection records from DFMS, 11 poles had been classified as unserviceable (nine to be replaced within two weeks and two within two months) based on the good wood and serviceability index and 196 poles were recorded as serviceable or suitable for reinforcing within two months. But 193 records had no entry against the ‘Results of Pole Serviceability’ field”. No explanation is provided for this omission. No finding about this has been made.*

*By inference, the figures seem to indicate there is likely to be 11 poles requiring replacement or reinforcement within two weeks (or two months) which have not been identified.*

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<sup>392</sup> Ibid, p2.

<sup>393</sup> Western Power (2011) [Asset Management System Review - Final Report](#). GHD Pty Ltd. October 2011.

<sup>394</sup> Ibid, p48.

<sup>395</sup> Letter from Mr Rob Thornton, Principal Engineer, Electricity Supply, EnergySafety to Mr Harry Hilton, Analyst, Economic Regulation Authority “*Western Power - Asset Management System Review - Final Report by GHD to the ERA (October 2011)*”. 7 November 2011, p2.

*Recent destructive pole testing confirms the conclusion from similar tests in May 2010 that the serviceability index based on the current pole inspection method will miss 20% of unsafe poles while over condemning 40% of safe poles.*

- 8.30 It follows from the foregoing assessment that potentially half of Western Power's wooden power poles recorded on the DFMS wooden power pole asset management system may lack a recorded 'Serviceability Index'. This Serviceability Index calculation is the principal indicator of wooden power pole condemnation or reinforcement scheduling. In addition, those serviceability index calculations which are recorded on the DFMS wooden power pole asset management system could miss up to 20% of unserviceable wooden power poles, and over condemn up to 40% of Western Power's safe wooden power poles. As a result, the reported condemnation rates may not correlate reliably with actual unserviceable wooden power poles in Western Power's distribution network. This Committee finds that such a situation, after EnergySafety's repeated admonitions over five years, is not supportable.

*As a result, the reported condemnation rates may not correlate reliably with actual unserviceable wooden power poles in Western Power's distribution network.*

#### *Pole Replacement Rates*

- 8.31 In its 2011 submission to the ERA, relating to the third Access Arrangement period 2012-2017, Western Power made the following statement:<sup>396</sup>

*We therefore propose to increase pole replacement and reinforcement rates during the AA3 period. The plan is to replace or reinforce an average of 33,000 poles per year at a total cost of \$748 million. This is a 70% increase on the AA2 program which in turn was double the AA1 program. The program will be prioritised to address the poles in the poorest condition and in the highest risk locations first.*

- 8.32 And later in the same document Western Power states that:<sup>397</sup>

*Much of the Western Power Network was constructed in the 1960s and 1970s. Safety and security have always been key drivers of investment. As the number of customers has increased, so too has*

<sup>396</sup> Western Power (2011) [Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. \(Access Arrangement Information\)](#). 30 September 2011, p15.

<sup>397</sup> *Ibid*, p173.

*pressure on the ageing network – and with it the underlying risk relating to safety, growth and security.*

*The continued growth in demand continues, and a further 130,000 customers are forecast to connect to the Western Power Network during AA3. Capacity expansion remains a key investment driver. However, AA3 represents a time when many of the network assets that were energised during the 1960s and 1970s are reaching the end of their serviceable lives, and many are in declining condition. This means that we need a sustained period of asset replacement to ensure the network remains safe and secure – while still facilitating growth – to prevent overall network condition from deteriorating to a level that it would be inefficient to recover from.*

*... such a situation, after EnergySafety's repeated admonitions over five years, is not supportable.*

8.33 The Committee is struck by the extent to which the above passages mirror the following observations made in EnergySafety's 2006 Audit:<sup>398</sup>

*Western Power's reported pole replacement rate infers an average pole life of 414 years (100/0.24), which is not credible and will not deliver acceptable wood pole network safety performance. The industry considers life expectancy of untreated jarrah poles to be 15 to 25 years. The life expectancy for reinforced and treated wood poles is greater and typically between 35 to 50 years. The actual service life of power poles is dependant on a number of factors including:*

- The quality of the wood poles purchased and installed.*
- The wood pole design and the initial factors of safety used in that design.*
- The environment in which the poles are placed.*
- The use (if any) and effectiveness of treatments to mitigate fungal and termite attack.*

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<sup>398</sup>

Department of Commerce, EnergySafety, *Western Power's Wood Pole Management Systems: Regulatory Compliance Assessment Report*, November 2006, p4.

- *Whether or not the poles are reinforced to extend the service life.*

...

*Credible pole replacement rates for Western Power's network with 689,000 wood poles would typically be in the range of 13,800 to 27,500 poles per annum.*

8.34 And later:<sup>399</sup>

*An estimate of the age profile based on this hand written document puts the average age of the poles in the networks in the order of 32 to 33 years.*

*It is evident from this data that most of the poles existing in Western Power's networks today were erected between the early 1950's and the early 1990's, that is most of the wood poles have been in service between 15 and 65 years. Given this wood pole age range and age profile, it was expected that Western Power would have been replacing wood poles at rates that reflects the average service life of these wood poles (35 to 50 years) and the number of poles in the networks. As already noted, this is not happening.*

*Five lost years in the face of such a significant task suggests to the Committee that the management and corporate culture of Western Power have been either unable, or unwilling, to make the necessary operational and paradigm changes within a realistic period of time.*

8.35 This Committee is extremely concerned that it has taken Western Power over five years to accept the validity of EnergySafety's assessment of 2006 referred to in the preceding paragraphs of this Report. The implications of five years lost time on the possibility of network renewal, public safety and subsequent future funding challenges are indeed troubling. Five lost years in the face of such a significant task suggests to the Committee that the management and corporate culture of Western Power have been either unable, or unwilling, to make the necessary operational and paradigm changes within a realistic period of time.

8.36 The Committee notes that, on 5 December 2011, EnergySafety advised Western Power that it does not accept that a 20 year program of accelerated corrective maintenance

<sup>399</sup> *Ibid*, p23.

investments is an appropriate time frame to address the significant public safety risk posed by the current state of Western Power's distribution wooden power pole asset base, as follows:<sup>400</sup>

*Importantly the Plans make no attempt to quantify the community risks implied by the proposed capital works program. Energy Safety, as the State's electricity safety regulator, cannot accept prolonging the very significant community risk for the next 20 years.*

*"... the Plans make no attempt to quantify the community risks implied by the proposed capital works program."*

8.37 The Committee notes with interest that Western Power has included the following information in its AA3 submission to the ERA relating to the projected costs associated with its aging network:<sup>401</sup>

**a) recurrent network costs (\$1.850 billion), comprising:**

- *preventative maintenance (\$746 million) – to maintain expected asset lives and network performance through the proactive inspection and identification and treatment of poor performing assets that are likely to fail*
- *corrective maintenance (\$697 million) – to rectify unsafe conditions as a result of extreme weather events, ageing assets, failed assets and other reactive events*
- *network operations (\$257 million) – to provide communication within the Western Power Network, allow access to the network for maintenance and capital works and maintain reliability through network monitoring and network switching operations*

8.38 Diagrammatically, the historical underinvestment by Western Power in compliance and asset replacement is thrown into relief when considering the following three graphs, taken from Western Power's AA3 submission to the ERA:<sup>402</sup>

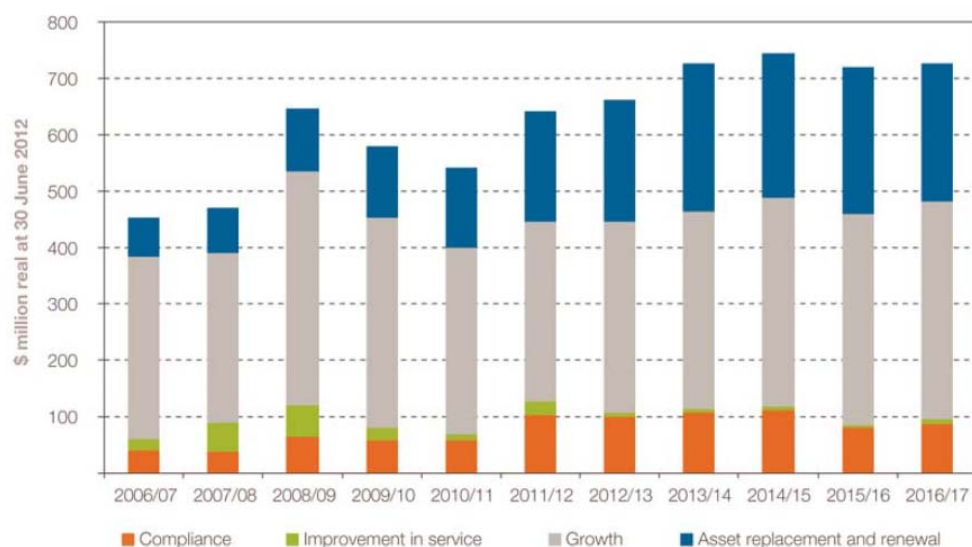
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<sup>400</sup> Letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power "Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011", (A2845673). 5 December 2011, p9.

<sup>401</sup> Western Power (2011) [Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. \(Access Arrangement Information\)](#). 30 September 2011, p143.

<sup>402</sup> *Ibid*, Figure 83 p204; Figure 84 p210; and Figure 86 p213.

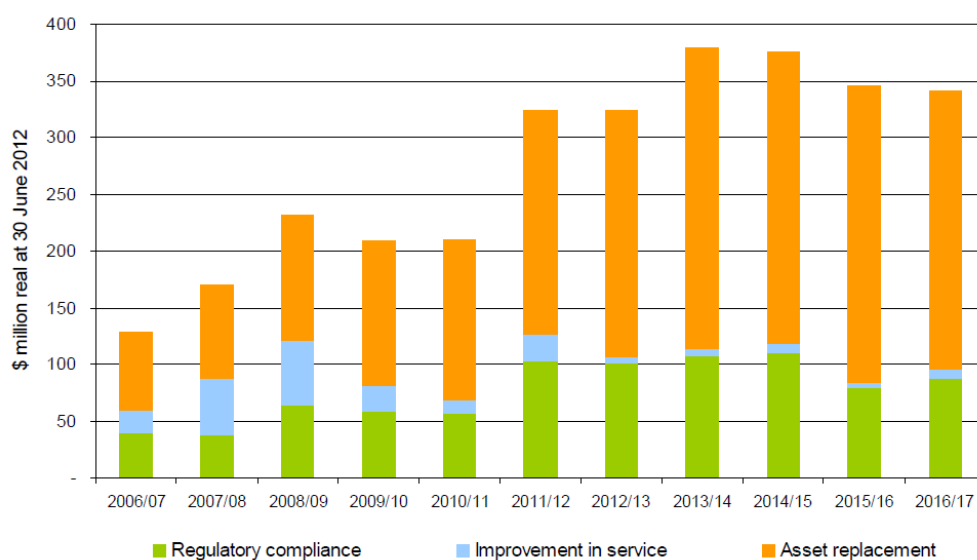




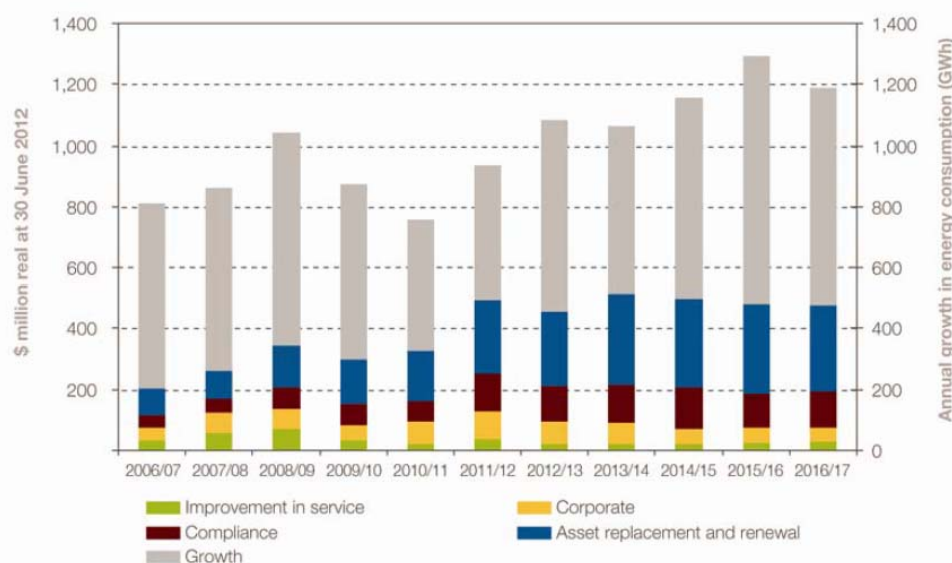
**Figure 82: Total distribution capital expenditure by regulatory category**

*Cursory reference to these graphs suggests strongly that Western Power has not invested adequately in either compliance or asset replacement prior to the AA3 period.*

8.39 And:



**Figure 84: Distribution non-growth capital expenditure by regulatory category**



**Figure 86: Total capital expenditure compared to history by regulatory category**

- 8.40 Cursory reference to these graphs suggests strongly that Western Power has not invested adequately in either compliance or asset replacement prior to the AA3 period. As Western Power explains in its AA3 submission to ERA, it will be appreciated from each of these graphs that:<sup>403</sup>

*... there is a step increase in capital expenditure for asset replacement and renewal and compliance from 2010/11 to 2011/12, and is then held relatively consistent during the AA3 period. The increase in asset replacement and renewal and compliance capital expenditure is largely due to an increase in the pole management program and bushfire mitigation activities and the replacement of 280,000 non-compliant meters.*

*Western Power's actual volume of wooden power pole replacements in each of the last five financial years have fallen below the minimum end of the range of replacements identified by EnergySafety in 2006 as being "credible" - namely 13,800 ...*

- 8.41 As noted at paragraph 7.23 above, the ERA has confirmed to this Committee that it would have endorsed funding for such essential compliance and safety-related

<sup>403</sup>

*Ibid*, p214.

expenditure - if it had been requested by Western Power. When this point was raised with Western Power at a public hearing the following exchange occurred:<sup>404</sup>

***The CHAIRMAN:** Only two weeks ago, this committee was told by the chair of the ERA that if Western Power had put it to the ERA that it needed to spend more on poles to be consistent with what EnergySafety required to be done, obviously the ERA would have approved that as appropriate expenditure.*

***Mr Aberle:** And I am sure that is the case. The other issue to bear in mind, as I have said before, when you look at the vector diagram, is the issue of deliverability; it is not just a question of throwing bucket loads of money. You actually have to be able to access the network at a rate that will allow you to do the work without turning people off, and you actually have to access the appropriate skills and, for that matter, equipment to get the work done, and that is why this is a continuous ramp.*

- 8.42 According to figures provided to this Committee on 5 December 2011, Western Power's actual volume of wooden power pole replacements in each of the last five financial years have fallen below the minimum end of the range of replacements identified by EnergySafety in 2006 as being "credible" - namely 13,800 wooden power poles per annum. The following chart is taken from answers to questions on notice following the 21 November 2011 public hearing with Western Power:<sup>405</sup>

Wood Pole Replacements	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12*
Actual Volumes	5,004	6,060	9,409	10,608	12,417	14,943
Access Arrangement 1	2,800	5,000	5,000			
Access Arrangement 2				6,200	7,000	9,350

\* 2011/12 pole replacement volumes are forecast.

*The Committee has formed the view that there is reason to believe that the management practices described by the ERA in 2009, and the poor rate of progress by Western Power with respect to its wooden power pole asset base since 2006 are directly related.*

<sup>404</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p37.

<sup>405</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "Response to Questions on Notice". 5 December 2011, p16.

- 8.43 According to media reports, the senior executive management group of Western Power held a special celebration, at the expense of Western Power, four days after Western Power's second public hearing before this Committee, to in part, mark replacing more wooden power poles in the preceding financial year than ever before in the corporation's history.<sup>406</sup>
- 8.44 The Committee has received written confirmation from Western Power that it has only been during calendar year 2011 that Western Power has managed to replace more than 13,800 wooden power poles. This was the minimum number of wooden power pole replacements that EnergySafety said in its 2006 Audit was a "*credible*" rate of replacement. It was further troubling for the Committee to note that the only figure in the above table that exceeds the minimum end of the "*credible*" replacement rate identified in 2006 is a "*forecast*" figure and not an "*actual*" figure. The Committee notes that the Managing Director did not refer in his response, extracted above, to the ERA's damning assessment of Western Power's management practices summarised in paragraphs 5.115 and 7.1 above. The Committee has formed the view that there is reason to believe that the management practices described by the ERA in 2009, and the poor rate of progress by Western Power with respect to its wooden power pole asset base since 2006 are directly related.
- 8.45 The Committee notes that reference to Western Powers Annual Reports from 2006 to 2009 reveals that the Managing Director personally received monetary performance bonuses totalling in excess of \$280,000 over this period. The same sources reveal that Western Power's senior executive management team shared in excess of \$1.73 million in monetary performance bonuses for the same period. This in turn raises significant questions about the performance of the Board of Western Power during, and since that period, particularly with respect to the performance management of the corporation's leadership team.

*This in turn raises significant questions about the performance of the Board of Western Power during, and since that period, particularly with respect to the performance management of the corporation's leadership team.*

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<sup>406</sup>

West Australian (2011) "*Utility Party Bill Sparks Anger.*" 15 December 2011, p3.

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*Wooden Power Pole Asset Management Systems*

- 8.46 The Committee notes the following comment made by the reviewer in Western Power's 2010 Asset Management Report:<sup>407</sup>

*Since the previous audit, bundled zone wood pole inspections have been introduced. ... The output from this programme has been that wood poles and their associated assets will be in a condition to ensure continued performance requirements for the period to the next inspection cycle, currently 4 years without any further major corrective maintenance.*

*Western Power should be congratulated for this initiative which has shown considerable efficiency and cost savings.*

*Pole inspection backlog identified at the previous audit is now being managed via a specific work programme which includes introduction of the bundled inspection process described above. Management information provided indicated that the backlog is reducing and is scheduled to be completed by the end of the 2011 inspection period. It was however stated that this progress could be affected by any new requirements for inspection following the Energy Safety report on wood pole inspections.*

- 8.47 The Committee notes that the “bundling” innovation about which the reviewer makes favourable commentary was, in fact, a response of Western Power’s to EnergySafety’s 2006 Audit Report. The Committee also notes from the foregoing that, at the time of the 2010 Asset Management Report, Western Power indicated that the “Pole inspection backlog” was “scheduled to be completed by the end of the 2011 inspection period.”<sup>408</sup>

*“Well, they developed a plan but the plan is just not going to serve, not going to meet the requirements of, a safe outcome.”*

- 8.48 According to Western Power’s AA3 submission to ERA:<sup>409</sup>

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<sup>407</sup> Western Power (2010) [\*Asset Management System - the ERA Assessment Report\*](#). Lloyds Register. 1 April 2010, p27.

<sup>408</sup> *Ibid*, p 28.

<sup>409</sup> Western Power (2011) [\*Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. \(Appendix L: Network Management Plan: September 2011\)\*](#). 30 September 2011, p4-18.

*For distribution network assets, Western Power was an early adopter of integrating GIS (geographic information systems) into asset registration and management. An integrated dataset of distribution assets has been consolidated and maintained for over 20 years.*

*The remaining 16 elements of an acceptable "Wood Pole Management Plan" which were expressly stipulated by EnergySafety in the 2009 Inspector's Order were not adequately addressed.*

- 8.49 The 2009 Inspector's Order required Western Power to "develop and document a Wood Pole Management Plan" by 31 January 2010.<sup>410</sup> The Committee questioned officers of EnergySafety about progress made on this aspect of the 2009 Inspector's Order at a hearing on 21 September 2011 as follows:<sup>411</sup>

**The CHAIRMAN:** *Can we keep moving on? Wood pole management plan; again, let us talk about the January 2010 plan.*

**Mr Bunko:** *Well, they developed a plan but the plan is just not going to serve, not going to meet the requirements of, a safe outcome.*

...

**The CHAIRMAN:** .... *So it is one thing to say they have developed a plan and they then come down to you and have said, "Yes, here's the plan". The question is: Is that a workable plan? Are we confident that Western Power have got the management and the capacity to make that plan manageable? So it is not just about having a plan, is it?*

**Mr Bowron:** *No, absolutely not; it is the quality of the plan and it is the intent behind the plan.*

**The CHAIRMAN:** *So do they have a plan by January 2010?*

**Mr Bowron:** *No, not under that fuller definition.*

**The CHAIRMAN:** *And do they have one now?*

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<sup>410</sup> Department of Commerce, EnergySafety, (2009) [\*Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009\*](#), 29 September, 2009, p6.

<sup>411</sup> Mr Ken Bowron, Executive Director and Mr Michael Bunko, Acting Director, Electricity Compliance EnergySafety, *Transcript of Evidence*. 21 September 2011, p24.

**Mr Bowron:** *No.*

- 8.50 The Committee also notes that Western Power provided a copy of its latest “*Wood Pole Asset Management Plan 2011-17*” to EnergySafety in October 2011. This document was also tabled by Western Power at a public hearing before this Committee on Wednesday, 9 November 2011. As discussed briefly in paragraph 7.123 above, EnergySafety has subsequently advised the Committee that this document does not comply with the requirements of its 2009 Inspector’s Order on Western Power to develop and implement a comprehensive “*Wood Pole Management Plan*” by 1 February 2010.
- 8.51 The Committee has also been advised that, on 5 December 2011, EnergySafety wrote to Western Power about the requirements of the 2009 Inspector’s Order served by EnergySafety on Western Power, relating to developing and implementing a “*Wood Pole Management Plan*”. EnergySafety advised Western Power in this letter that the only aspects of this part of the 2009 Inspector’s Order that Western Power had completed to EnergySafety’s satisfaction were; detailing the planned inspection activity for each year of the pole inspection cycle; and, identifying the persons who prepared and authorised Western Power’s “*Wood Pole Management Plan*”. The remaining 16 elements of an acceptable “*Wood Pole Management Plan*” which were expressly stipulated by EnergySafety in the 2009 Inspector’s Order were not adequately addressed.<sup>412</sup>
- 8.52 This Committee also took particular note of the following observation by EnergySafety in September 2011 in evidence before the Committee, about the corporate culture of Western Power, and its implications for an integrated wooden power pole asset management system:<sup>413</sup>

*“One of the things we find with Western Power is they are like separate silos.”*

**Mr Bunko:** *One of the things we find with Western Power is they are like separate silos. They do not have an integrated plan or project management across the whole thing, which is the issue with wood poles. They buy the wood poles in, they have to do them and they have to replace them. They do not seem to have proper project management to deal with the whole project; they do it in segments*

<sup>412</sup> Letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power “*Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011*”, (A2845673). 5 December 2011, p4-6.

<sup>413</sup> Mr Michael Bunko, Acting Director, Electricity Compliance and Mr Rob Thornton, Principal Engineer, Electricity Supply EnergySafety, *Transcript of Evidence*. 21 September 2011, p27.

*and different years based on different funding. They tend, if they do not have the funding one year, they are going to stop doing it.*

**Mr Thornton:** *We had evidence in the clashing conductor audit. We were reading the records and it says, “Our target is 2 250 bays we are going to sort out. We actually only did 1 200 because we found 1 000 did not need it.” What is with who decides that? Is it the supervisor? They say, “Oh no, it might’ve been some other program.” That is the lack of integration to the extent that the crew gets out, all the gear was ready to go, “Oh, this is brand new. Okay, tick. Done.” Again it comes back to management, as you say.*

- 8.53 This description of a “*silo-ed*” corporate culture within Western Power was repeated in evidence before the Committee by more than one source, and is of significant concern to the Committee.
- 8.54 On 9 December 2011, the ERA published its response to Western Power’s 2011 Asset Management Report, which was considered at paragraph 7.115 above.<sup>414</sup> This response noted some important improvements in Western Power’s asset management systems. However, the ERA made a number of highly critical comments regarding Western Power’s wooden power pole asset management systems, processes and practices, as follows:<sup>415</sup>

*The Authority is not satisfied with the effectiveness of Western Power’s distribution wood pole management. The review report has disclosed significant problems with Western Power’s recordkeeping in relation to the inspection of wood poles in the distribution network and the replacement of poles that have failed inspection and need to be replaced. Accurate and up to date records are central to Western Power’s capacity to manage the wood poles in its network.*

*“The Authority has informed Western Power that, if the standard of distribution wood pole management remains unsatisfactory following the 2012 review, then the Authority will consider taking further enforcement action.”*

*The wood pole recordkeeping problems disclosed in the review report are the third occasion that issues with the quality of Western Power’s recordkeeping processes and systems have been brought to the*

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<sup>414</sup> Economic Regulation Authority (2011) “[Information - Electricity Networks Corporation \(t/a Western Power\) 2011 Asset Management System Review Report](#).” 9 December 2011.

<sup>415</sup> *Ibid*, p1



*Authority's attention during 2011. In October 2011, the Authority served a notice on Western Power under section 32(1) of the Electricity Industry Act 2004 (section 32 notice) after receiving an unsatisfactory performance audit report of Western Power's licences. Four of the six items in the section 32 notice relate to problems with Western Power's recordkeeping. In May 2011, Western Power notified the Authority of a Type 1 (immediately reportable) licence contravention concerning problems with missing data in the database used to record life support customer addresses.*

*After considering Western Power's recent poor compliance record and the problems with Western Power's wood pole asset data disclosed in the review report, the Authority has decided to reduce the period of time until the next review from 18 months to 14 months. The next review will cover the period 1 May 2011 to 30 June 2012. The Authority has informed Western Power that, if the standard of distribution wood pole management remains unsatisfactory following the 2012 review, then the Authority will consider taking further enforcement action.*

*It is regrettable that such systems and processes were not adopted when the ERA decided not to renew Part 7 of its 2009 Notice of Compliance Failure which dealt specifically with the issue of wood power pole asset management systems, processes and practices. It is possible therefore that an important compliance measure was poorly handled by the ERA in that instance.*

- 8.55 The Committee notes that the ERA's most recent response to Western Power's Asset Management Report demonstrates sound regulatory practice, including specific reference to the findings of EnergySafety to the extent that these were of relevance to the ERA's broader considerations, and appears to be a genuine attempt to take due regard of the safety implications of Western Power's licence obligations. The Committee notes that this represents an improvement in the ERA's systems and processes. It is regrettable that such systems and processes were not adopted when the ERA decided not to renew Part 7 of its 2009 Notice of Compliance Failure which dealt specifically with the issue of wood power pole asset management systems, processes and practices. It is possible therefore that an important compliance measure was poorly handled by the ERA in that instance.

- 8.56 On the basis of the foregoing discussion, the Committee finds that Western Power's Wooden Power Pole Asset Management Systems are still seriously deficient; despite the passage of five and one half years since EnergySafety first raised this issue with Western Power in its 2006 Audit report.
- 8.57 In light of the concerning findings of audits and reviews by both EnergySafety and the ERA, in September 2011 the Committee asked the Auditor General if he had considered whether or not to implement a performance audit of Western Power's wooden power pole asset management systems. It will be recalled from paragraph 3.59 above, that the Auditor General's response to the Committee on this question was as follows:<sup>416</sup>

*An audit of Western Power and Horizon's management of their Wood Pole Assets was considered in 2009 but was deferred for 18 months for various reasons, including Western Power receiving additional funding for power pole replacement.*

*In late 2010 the audit process was restarted. Western Power and Horizon were formally advised of this decision and of the audit objective and scope in February 2011. However, the audit was again deferred when we became aware of the Public Administration Committee's enquiry and of its terms of reference.*

- 8.58 It is somewhat regrettable that the Auditor General should have felt constrained by the existence of a Parliamentary inquiry from engaging in a performance audit relating to issues of public safety. Nevertheless, the concerns which led to this circumstance are not entirely unreasonable. The Committee recommends that, should equivalent circumstances arise in the future in a different context, the Office of the Auditor General should make inquiry of the relevant Committee before making an independent assessment of if, and if so, to what extent, the statutory functions of that Office should be constrained or modified in the wider public interest.

*Subsequent to the hearing in question, the Office of the Auditor General has advised this Committee that preparations for a performance audit of Western Power's wooden power pole asset management systems have commenced.*

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<sup>416</sup> Tabled Document Ref: 28/09/11 from Mr Colin Murphy, Auditor General for Western Australia, tabled 28 September 2011, p3.

- 8.59 The issue of conducting a performance audit regarding these issues was raised with the Auditor General by the Committee at a hearing on 28 September 2011 as follows:<sup>417</sup>

***Hon ED DERMER:** What we are talking about is the responsibility for their assets which potentially are a public danger.*

***Mr Murphy:** Absolutely. To me that is the debate that I have observed between EnergySafety and Western Power and there is a significant difference in view between those two bodies on the current state of the poles and the maintenance regime. It would require a performance audit to get to the bottom of that.*

- 8.60 Subsequent to the hearing in question, the Office of the Auditor General has advised this Committee that preparations for a performance audit of Western Power's wooden power pole asset management systems have commenced.

### Wooden Power Pole Inspections

*As a result of the repeated requests by EnergySafety over this period, it appears that Western Power has recently adopted and implemented a standard industry version of the sound, dig and drill wooden power pole assessment technique, together with the standard industry wooden power pole serviceability calculation.*

- 8.61 The 2009 Inspector's Order required Western Power to "modify its sound, dig and drill pole inspection practice to inspect all wooden power poles around their full circumference in the safety critical zone 100mm to 200mm".<sup>418</sup> The Committee questioned officers of EnergySafety about progress made on this aspect of the 2009 Inspector's Order at a hearing on 21 September 2011, as follows:<sup>419</sup>

***The CHAIRMAN:** So when did that occur? We are a bit surprised with that because certainly when we started we would have thought that would not be the case. Is that a recent thing or do you think that they have had that capacity right from 2006?*

<sup>417</sup> *Ibid*, p5.

<sup>418</sup> Department of Commerce, EnergySafety, (2009) [Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009](#), 29 September, 2009, p6.

**Mr Bowron:** No they certainly have not had the capacity from 2006. Western Power was not complying with the application of the sound, dig and drill at 2006 or at 2008 and, in fact, it was probably one of the primary catalysts for us placing an order on Western Power. They then introduced what they call their enhanced sound, dig and drill methodology, if I remember correctly in about June 2010.

**Hon JIM CHOWN:** So it is very recent?

**Mr Bowron:** Very recent, and the main reason it is not enhanced is that we believe it is sound, dig and drill as intended. What was missing was consistently digging down around the pole and measuring the external diameter of the pole below ground level. We believe they are now doing that, although we have not audited it, and they have developed the serviceability criteria, which is basically comparing the pole required strength with the strength derived from those measurements.

**Hon JIM CHOWN:** So one could assume from the adoption of this maintenance policy that only a small percentage of the actual infrastructure or poles have been tested under this regime.

**Mr Bowron:** They have had just over a year now, and if you took it on a four-year cycle, which is their normal inspection cycle, at best it would be 25 per cent.

- 8.62 The above evidence should be read bearing in mind the fact that EnergySafety has engaged robustly with Western Power on the important issue of serviceability criteria for more than five years. As a result of the repeated requests by EnergySafety over this period, it appears that Western Power has recently adopted and implemented a standard industry version of the sound, dig and drill wooden power pole assessment technique, together with the standard industry wooden power pole serviceability calculation.<sup>420</sup>

*"Western Power is yet to validate its data from the 'enhanced' inspection system begun on 1 July 2010."*

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<sup>419</sup> Mr Ken Bowron, Executive Director, EnergySafety, *Transcript of Evidence*, 21 September 2011, p1.

<sup>420</sup> Ausgrid (2011) *NS145 Pole Inspection and Treatment Procedures*. June 2011, p6-25.

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- 8.63 EnergySafety specifically recognised the positive steps that Western Power had taken in this respect, when reviewing Western Power's response to the 2009 Inspector's Order in a letter dated 5 December 2011, as follows:<sup>421</sup>

*The recent introduction of vernier callipers has improved the measurement accuracy of external pole diameter, a critical datum for calculating a pole's Servicability Index (SI) Numbers [Items 2.1(a) & (b)].*

- 8.64 However, EnergySafety, in the following paragraph, went on to point out that:

*The SI calculation continues to rely on good-wood thickness figures of dubious accuracy, which Western Power adjusts by assumed standard deductions to produce conservative strength estimates [Item 2.1(c)].*

Later in the same correspondence, EnergySafety observed that:<sup>422</sup>

*Western Power is yet to validate its data from the 'enhanced' inspection system begun on 1 July 2010.*

*Western Power does appear to have complied with Required Action; "1. Pole Inspection" of the 2009 Inspector's Order*

- 8.65 This leads to the further question as to whether or not the standard industry wooden power pole serviceability methodology is itself, appropriate for the significant proportion of untreated jarrah wooden power poles in the Western Power network. In evidence to the Committee the Executive Director of EnergySafety made the following observations of relevance:<sup>423</sup>

**Mr Bowron:** ... *The problem is that jarrah is not an industry standard wood and it behaves very, very differently to the east coast woods. The first thing is that most of the east coast woods rot from the outside, so the external diameter is highly critical to them. Jarrah will get some outside rotting, but predominantly the rot that ruins a jarrah pole is internal. The second point is that internal rot is highly irregular; it does not happen concentrically. So where you drill the*

<sup>421</sup> Letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power "Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011", (A2845673). 5 December 2011, p2.

<sup>422</sup> *Ibid*, p7.

<sup>423</sup> Mr Ken Bowron, Executive Director, EnergySafety, *Transcript of Evidence*, 21 September 2011, p3.

*hole matters both from where the force is on the pole and where you might get the thickest or thinnest piece of wood.*

**The CHAIRMAN:** *And you may have hit the only piece of good wood.*

**Mr Bowron:** *And you may have hit the only piece of good wood. The third element is that the most common rot, the carrot rot in jarrah, is hard. So when using the test methodology, which is in effect putting a bent screw driver through a hole and pulling back to feel resistance, you cannot tell the difference between good wood and carrot rot. So there is a preponderance of over measurement of the amount of good wood.*

- 8.66 Notwithstanding these qualifications, the Committee notes that Western Power does appear to have complied with Required Action; “**1. Pole Inspection**” of the 2009 Inspector’s Order by modifying “*its sound, dig and drill pole inspection practice to inspect all wood poles around their full circumference in the safety critical zone 100mm to 200mm*”, and by implementing the changed methodology by the stipulated dates.<sup>424</sup>

*“They have given us plans but the plans are deficient.”*

- 8.67 With respect to Western Power’s substantive response to the 2009 Inspector’s Order, the Committee was concerned to note the following observations of EnergySafety:<sup>425</sup>

**The CHAIRMAN:** *So they did meet your order and compliance in this question?*

**Mr Bowron:** *As far as the dates go, yes.*

**The CHAIRMAN:** *I refer to question number two— so I do not have to read it out to you— which refers to replacement plans for the distribution network; what is going on there?*

**Mr Bowron:** *No, we do not have a plan from Western Power.*

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<sup>424</sup> Letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power “*Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011*”, (A2845673). 5 December 2011, p1.

<sup>425</sup> Mr Ken Bowron, Executive Director and Mr Michael Bunko, Acting Director, Electricity Compliance EnergySafety, *Transcript of Evidence*. 21 September 2011, p5.

**The CHAIRMAN:** *Is that because they have no idea what the asset base is?*

**Mr Bunko:** *They have given us plans but the plans are deficient.*

8.68 Further concerning observations were made elsewhere at the same hearing as follows:<sup>426</sup>

**The CHAIRMAN:** *I am saying that if they complied with your orders, they should have improved their management and reporting and asset-based practices.*

**Mr Thornton:** *It would probably be more accurate to say that they have complied with the words in the order as opposed to the effectiveness that was sitting behind those words.*

**The CHAIRMAN:** *So, the question I am trying to put is: are they in a better place now, at this date, to answer those questions you have been putting forward?*

**Mr Bowron:** *Right at the moment, I do not believe they are.*

**Mr Bunko:** *If you have a look at it, they do not have the plan to make all their poles compliant by 2015.*

... five and one half years after EnergySafety first raised the wooden power pole inspection backlog, the Committee cannot verify precisely what progress has actually been made by Western Power in this area.

8.69 And again as follows:<sup>427</sup>

**Mr Bowron:** *I guess that we have not always felt that all the information has been as forthcoming as it should, or as thorough as it should. Whether that is from a philosophy of obstruction or inability*

<sup>426</sup> Mr Ken Bowron, Executive Director, Mr Michael Bunko, Acting Director, Electricity Compliance and Mr Rob Thornton, Principal Engineer, Electricity Supply EnergySafety, *Transcript of Evidence*. 21 September 2011, p8. See also, letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power “*Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011*”, (A2845673). 5 December 2011, p9.

<sup>427</sup> Mr Ken Bowron, Executive Director and Mr Michael Bunko, Acting Director, Electricity Compliance EnergySafety, *Transcript of Evidence*. 21 September 2011, p12.

*or the data does not exist, we have varying opinions internally about that.*

...

**Mr Bowron:** *So protection of the organisation's reputation comes before safety is our concern.*

- 8.70 The Committee is further troubled by the recent revelation that Western Power's latest round of controlled testing has not confirmed the validity of its wooden power pole inspection methodology.<sup>428</sup>
- 8.71 Accordingly, some five and one half years after EnergySafety first raised the wooden power pole inspection backlog, the Committee cannot verify precisely what progress has actually been made by Western Power in this area.

### Unassisted Wooden Power Pole Failures in the Rural Network

*Evidence to the Committee from Officers of EnergySafety also suggests that Western Power's concern with its corporate reputation may be influencing its approach to reporting unassisted wooden power pole failures.*

- 8.72 The 2009 Inspector's Order required Western Power to "conduct a Technical Engineering Review of the rural wood pole strengths".<sup>429</sup> The Committee questioned officers of EnergySafety about progress made on this aspect of the 2009 Inspector's Order at a hearing on 21 September 2011 as follows:<sup>430</sup>

**The CHAIRMAN:** ... *Can we just have a quick look at rural pole safety? Was the date of January 2010 met?*

**Mr Bunko:** *Yes.*

**Mr Bowron:** *In time, but not quality. The same answer: yes, in time; no, in quality.*

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<sup>428</sup> Letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power "Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011", (A2845673). 5 December 2011, p7.

<sup>429</sup> Department of Commerce, EnergySafety, (2009) [\*Inspector's Order - Energy Coordination Act 1994 s18B No. 01-2009\*](#). 29 September, 2009, p9.



**The CHAIRMAN:** *So you got a response, but you have a question about the quality.*

**Mr Thornton:** *Except that they missed 137 000 poles out of 404 000.*

- 8.73 According to EnergySafety, Western Power chose to analyse in-line poles, and to exclude from its Technical Engineering Review “poles that are stayed or in rural towns”. Evidence to the Committee from Officers of EnergySafety also suggests that Western Power’s concern with its corporate reputation may be influencing its approach to reporting unassisted wooden power pole failures, as follows:<sup>431</sup>

**Mr Thornton:** *Western Power has now agreed that it will classify other than “hit by a third party”, “hit by vehicle”, and there are still some issues about that; if a Nissan Micra nudges it at two kays, up to this stage we are saying, “Yes, that can be assisted”, but every other pole—unless you can demonstrate that the forces were greater than the 147 kilometres an hour, we will not accept any pole down as being “assisted”.*

**The CHAIRMAN:** *What I am trying to say, though, goes beyond that, because people are out there in court cases, even when there is not loss of life, there is loss of property, burnt crops, burnt fences—all of those questions. Much of those cases are reliant on Western Power evidence.*

**Mr Thornton:** *And that is why they say, “Yes, we will report all these to you, EnergySafety, but we will continue to use the industry standard, which is, if there is some outside event, extreme event, we will count them as assisted”. They are saying, “We must do that so we can compare ourselves with the eastern states”, which is why you can have 36 instead of 350 in a year. They have got an eye to this litigation again. They are saying, “We’ll continue to publish. We are doing a fantastic job. And we will tell you, EnergySafety, the real story.”*

*This Committee was troubled to discover from EnergySafety, as recently as 5 December 2011, that Western Power is still not satisfying the requirements of the 2009 Inspectors Order.*

<sup>430</sup>

Mr Ken Bowron, Executive Director, Mr Michael Bunko, Acting Director, Electricity Compliance and Mr Rob Thornton, Principal Engineer, Electricity Supply EnergySafety, *Transcript of Evidence*. 21 September 2011, p25.

As discussed at paragraphs 7.87 and 8.24 above, some evidence in support of this assessment of Western Power's approach can be found in both Western Power's AA3 submission to the ERA,<sup>432</sup> and in answers to this Committee's questions on notice.<sup>433</sup>

- 8.74 Western Power's AA3 submission to the ERA refers to winds of 120kph and 126kph as "*severe*",<sup>434</sup> with the implication being that this warrants consideration of related pole failures as "*assisted*" failures (ie: assisted by wind). It is conceded that such wind speeds are indeed severe. However, as indicated previously, reference to the relevant industry standards<sup>435</sup> indicates that wooden power poles are required to be able to withstand 50 year storm events, or wind speeds up to 140kph. The inference drawn by the Committee, where wooden power poles fail in wind conditions below 140kph, is that the wooden power poles in question were, in terms of the standards described in the 2009 Inspector's Order, unserviceable. Western Power's approach, however, appears to have been to classify such failures as aberrant (*force majeure*) events, so far outside the norm as to warrant exclusion from any prudent assessment of Western Power's safety performance.<sup>436</sup>

*The inference drawn by the Committee, where wooden power poles fail in wind conditions below 140kph, is that the wooden power poles in question were ... unserviceable.*

- 8.75 This Committee was troubled to discover from EnergySafety, as recently as 5 December 2011, that Western Power is still not satisfying the requirements of the

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<sup>431</sup> Mr Rob Thornton, Principal Engineer, Electricity Supply EnergySafety, *Transcript of Evidence*. 21 September 2011, p26.

<sup>432</sup> Western Power (2011) [\*Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. \(Access Arrangement Information\)\*](#). 30 September 2011, pp53 & 276.

<sup>433</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "*Response to Questions on Notice*". 5 December 2011, p24.

<sup>434</sup> Western Power (2011) [\*Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. \(Access Arrangement Information\)\*](#). 30 September 2011, pp53 & 276.

<sup>435</sup> ESSA HB C(b)1 - 1999 "*Guidelines for design and maintenance of overhead distribution and transmission lines*", and Australian/New Zealand Standard AS/NZS4676:2000 "*Structural design requirements for utility services poles*".

<sup>436</sup> Note also the apparent hair-splitting regarding the definition of "*unassisted failure*" in connection with wooden power poles in Western Power (2011) [\*Western Power's Proposed Revisions to the Access Arrangement and Access Arrangement Information. 2012-2017. \(Access Arrangement Information\)\*](#). 30 September 2011, p58, at footnote 42 the following qualification is inserted "*Unassisted means not attributable to an external factor such as storms, third party collisions or bushfire*" The Committee notes that no allowance for wooden power pole failure at wind loads below relevant standards, or bushfires caused by wooden power pole failures is made in such a legalistic approach.

2009 Inspectors Order. This fact was raised with Western Power by the Committee at a public hearing as indicated in the following transcript extract:<sup>437</sup>

***The CHAIRMAN:** So we move on to exhibit W3, which is on the screen and which is quite short. Are you aware that EnergySafety's 2009 section 18B inspector's order required Western Power to produce an adequate wood pole management plan by February 2010?*

***Mr Aberle:** Yes, we are.*

***The CHAIRMAN:** As recently as September 2011, EnergySafety advised this committee that they were not satisfied that Western Power had provided them with an adequate wood pole management plan such as was required under its 2009 inspector's order. Do you have any comments?*

***Mr Aberle:** Yes, indeed. We have been providing those plans as required, and as I mentioned earlier when you first raised the question of a difference, it really hinges on the fact that the plan refers to the hybrid SI methodology rather than age-based replacement exclusively. But I might let Mr de Laeter say a bit more about that because he has been in charge of pulling our plan together.*

***Mr de Laeter:** Yes. The major area of concern for our plan, which we delivered on schedule on 31 January 2010, based on the feedback we received from EnergySafety, was, one, that the plan did not give EnergySafety sufficient comfort that we had a funded long-term investment strategy at the requisite volumes to acquit the poles at risk, as identified by AS1720, which is the age-based criteria that you referred to earlier; and, number two, that we had not yet demonstrated to EnergySafety's satisfaction that our inspection methodology was sufficiently accurate. So what we have been doing since then is to develop both of those, and we believe that the latest version of the wood pole management plan achieves both of those requirements within the limits that Mr Aberle would have spoken to concerning the tensions between affordability, safety, resource ability and other matters. We have yet to receive feedback from EnergySafety, as explained before, as to their view of our plan.*

***The CHAIRMAN:** We have, and their preliminary view is that it still has significant deficiencies.*

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<sup>437</sup>

Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*. 9 November 2011, p6.

**Mr Aberle:** *Could we ask when you received that feedback from them?*

**The CHAIRMAN:** *It would have to be in the last week.*

- 8.76 The Committee notes that, in the above extract from the public hearing, Western Power’s two most senior executives responsible for the corporation’s distribution network both expressed the view that EnergySafety’s principal requirement was for Western Power to replace its poles on the basis of age. This characterisation is also evident in relevant management submissions to Western Power’s own Board. Indeed, the Committee notes the view, expressed by the Managing Director above, that EnergySafety’s requirement was for wooden power pole “*age-based replacement exclusively*”. This Committee has had access to all relevant communications between EnergySafety and Western Power and nowhere has EnergySafety suggested such an approach. It will be recalled from paragraph 5.22 above that EnergySafety has, in fact, been consistently saying as follows:<sup>438</sup>

*Balancing economic life against reliability and safety risks requires data Western Power does not have but should collect.*

*In the short run, while the necessary data are gathered and analysed, the prudent path is to use the best information available and err on the side of caution.*

*“We do not want money wasted, and we are trying to find a basis—because they could use age, and that was our emphasis on age, but we are prepared to look at anything that can extend the life of a pole but provide a safe outcome.”*

And:<sup>439</sup>

**Mr Bunko:** *... We issued the order in 2009 for them to produce proper management plans, proper inspection systems, and to have a proper replacement plan so that they knew when they were going to replace their poles and how they were going to do it. They were not doing that; that is why we issued the order. Since the order has been issued, I do not know how many asset managers they have had, but they have had some trouble in producing things. Like, for instance, to*

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<sup>438</sup> Department of Commerce, EnergySafety, [2008 Distribution Wood Pole Audit Review](#). May 2009, p47.

<sup>439</sup> Mr Michael Bunko, Acting Director, Electricity Compliance, EnergySafety, *Transcript of Evidence*. 21 September 2011, p10.

*do the report in 2010 they really did not do it properly on testing 50 poles. Then they refused to do any further testing until late last year. They finally agreed that they would test another 50 poles and properly use some scientific basis. And since then we have engaged our own experts, obviously, to look at that, because we want to know does what they call enhanced sound, dig and drill give a good result, because we are looking at the point of view of we do not want Western Power to replace a whole lot of poles that do not need to be replaced, but we want to make sure that they replace the right ones that are unsafe. We do not want money wasted, and we are trying to find a basis—because they could use age, and that was our emphasis on age, but we are prepared to look at anything that can extend the life of a pole but provide a safe outcome.*

*EnergySafety's subsequent assessment of Western Power's progress in this area has not been re-assuring.*

- 8.77 In addition, Western Power provided this Committee with the following evidence on 5 December 2011:<sup>440</sup>

*... by agreement with EnergySafety - further testing took place in 2011. EnergySafety's consultants were fully involved throughout the process.*

*These further tests showed that the Serviceability Index is based on sound engineering principles and can be further tuned to optimise the identification of unsafe wood power poles.*

*Western Power has been advised that the accuracy of our serviceability assessment is commensurate with others across Australia.*

*The tests conducted in 2010 and 2011 are some of the most comprehensive forensic and structural tests of timbers poles undertaken anywhere in Australia.*

*The 2011 tests found Western Power's inspection methods as comparable to the eastern state utilities. Western Power's identification of unsafe wood power poles is in line with the eastern states, more conservative and better at finding "rogue" poles. Western*

<sup>440</sup> Letter from Mr Doug Aberle, Managing Director, Western Power "Response to Questions on Notice". 5 December 2011, p26.

*Power has also received advice that its approach to calculating serviceability is at the leading edge of field assessment.*

*Nonetheless, the test results have identified further improvements to Western Power's inspection and serviceability assessment methodology and Western Power is committed to implementing these as a part of a continual improvement process as quickly as practicably possible.*

- 8.78 The Committee notes Western Power's positive indications at both the public hearing and in subsequent answers to questions on notice, referred to in preceding paragraphs, in seeking to demonstrate a justifiable understanding of its major distribution asset base. However, EnergySafety's subsequent assessment of Western Power's progress in this area has not been re-assuring. On 5 December 2011, EnergySafety wrote to Western Power in the following terms:<sup>441</sup>

5.2 *By 31 May 2010 validate the pole strengths identified through this Technical Engineering Review by testing in situ to failure of at least 50 poles with the lowest assessed safety factor and comparing the failure forces with those predicted from the Technical Engineering Review.*

*The May 2010 50-pole test program was badly planned, executed, analysed and reported. But the results, such as they were, indicated strongly that Western Power's pole inspection data were very unreliable. The database fell well short of a basis for community safety. The pole strengths therefore were not validated - rather they were shown to be invalid and did not justify a meaningful revision to the Review results. Therefore, this item was not completed.*

*Western Power is yet to validate its data from the 'enhanced' inspection system begun on 1 July 2010.*

*The May 2010 50-pole test program was badly planned, executed, analysed and reported. But the results, such as they were, indicated strongly that Western Power's pole inspection data were very unreliable. The database fell well short of a basis for community safety.*

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<sup>441</sup> Letter from Mr Michael Bunko, Director, Electricity Compliance, EnergySafety to Mr Mark de Laeter, General Manager, Networks, Western Power "Wood Pole Management Plan 2011-2017; Rural Wood Pole Safety Improvement Plan 2011", (A2845673). 5 December 2011, p7.

- 8.79 It is further troubling to this Committee that, notwithstanding this position being consistently held by EnergySafety, and related to this committee by senior officers of EnergySafety in person before this Committee as recently as 31 September 2011, the ERA did not renew Part 7 of its 2009 Notice of Compliance Failure when it reviewed that Notice on 17 October 2011 (see paragraph 4.5 above for the text of Part 7 and paragraph 8.55 generally).<sup>442</sup> It appears to the Committee that this decision by the ERA was not made in consultation with EnergySafety.
- 8.80 This is an unfortunate example of a lack of coherence in the present regulatory framework. This issue was raised directly with the ERA in evidence before this Committee as follows:<sup>443</sup>

*The CHAIRMAN: When you closed it off, were there any findings made about it?*

*Mr Kelly: The section 32 notice that was previously issued?*

*The CHAIRMAN: The section 32 notice, yes. Part 7.*

*Mr Kelly: When we issued the subsequent notice, the other one was withdrawn—the previous section 32 notice was withdrawn.*

*This is an unfortunate example of a lack of coherence in the present regulatory framework.*

*The CHAIRMAN: Withdrawn, but with no findings made? Clearly, you are telling us that the ERA did not make any findings?*

*Mr Rowe: It was withdrawn on the basis that a number of the issues had been dealt with, and those that were outstanding were picked up in the following section 32 notices. There were a couple that were not.*

*The CHAIRMAN: The staff are telling me that part 7 does not appear in the new document.*

*Mr Kelly: Part 7?*

<sup>442</sup> [http://www.erawa.com.au/cproot\\_download/9981/63094/20111017%20Information%20-%20Electricity%20Networks%20Corporation%20\(t-a%20Western%20Power\)%20-%20Performance%20Audit%20Reports.pdf](http://www.erawa.com.au/cproot_download/9981/63094/20111017%20Information%20-%20Electricity%20Networks%20Corporation%20(t-a%20Western%20Power)%20-%20Performance%20Audit%20Reports.pdf). (Accessed 15 November 2011).

<sup>443</sup> Mr Lyndon Rowe, Chairman, Economic Regulation Authority, *Transcript of Evidence*. 7 November 2011, p25.

**Mr Rowe:** *That is right.*

**The CHAIRMAN:** *So, 7.16, the extension of asset lives moving expected replacement date to the future where condition information is not available, meaning that these assets are likely to fail before the extended life has been reached.*

**Mr Kelly:** *It was a document put together by the State Solicitor's Office which formed part of our notice, and what has occurred is that they have extracted various clauses from the review to substantiate 19.1, basically, in saying that technically, it is a breach.*

**The CHAIRMAN:** *So the attitude is that everything is okay now?*

**Mr Rowe:** *No, because the current asset management review is yet to come before the authority.*

**The CHAIRMAN:** *It is just of interest to the committee, that last paragraph. The extension of asset life and moving the expected replacement date to the future, where accurate condition information is not available, meaning that these assets are likely to fail before the extended life is reached. That pretty much sums up what we have been talking about all day. We will move on.*

**Hon JIM CHOWN:** *I am just wondering when the current asset future review is due.*

**Mr Rowe:** *You have the final report before you. That is the one we discussed right at the start. It has not been to the authority yet.*

**The CHAIRMAN:** *Are you aware that, as recently as late September this year, EnergySafety advised this committee that it was still not satisfied with Western Power's response to EnergySafety's 2009 order, particularly with respect to wood pole management plan.*

**Mr Rowe:** *I am not aware that it has advised this committee, but I am aware that EnergySafety has told us that it is not comfortable with it, yes.*

**The CHAIRMAN:** *So how did this information feature in ERA's deliberations concerning the 2009 notice of failure to comply?*

**Mr Rowe:** *It goes to the asset management review, not the performance audit, and the asset management review in follow-up to that is still to come to the authority.*



***The CHAIRMAN:** So what is the use of regulatory infringement notices if audits are simply ignored for so long that the regulator simply closes off on it?*

- 8.81 These disclosures raise troubling questions about the extent to which Western Power's two principal regulatory agencies maintain a close professional working relationship. They also raise concerning questions about the ERA's decision to discontinue Part 7 of the ERA's 2009 Notice of Compliance Failure served on Western Power. These concerns appear to have been validated by the ERA's findings, published on 9 December 2011, that Western Power's wooden power pole asset management systems remain non-compliant.<sup>444</sup>

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<sup>444</sup> Economic Regulation Authority (2011) "[\*Information - Electricity Networks Corporation \(t/a Western Power\) 2011 Asset Management System Review Report\*](#)" 9 December 2011.

## 9 REGULATORY FRAMEWORK

*The relationship between Western Power's licence conditions on the one hand, and questions of energy safety on the other, is far from clear to this Committee, despite this inquiry running over more than two years.*

- 9.1 At present, Western Power is subject to regulatory oversight by two specialist energy regulators, namely; EnergySafety within the Department of Commerce; and, the ERA. The relationship between Western Power's licence conditions on the one hand, and questions of energy safety on the other, is far from clear to this Committee, despite this inquiry running over more than two years. In evidence to this Committee, the Chair of the ERA indicated that there was a link between safety issues and Western power's licence conditions.<sup>445</sup>

***The CHAIRMAN:** Question 6: to what extent do issues of energy safety relate to the economic regulation of Western Power? Is it economically efficient for an electricity utility such as Western Power to chronically under-invest in infrastructure maintenance and cap-ex?*

***Mr Rowe:** No.*

***The CHAIRMAN:** That is simple. How would a chronic under-investment in infrastructure maintenance and cap-ex manifest itself in economic terms?*

***Mr Rowe:** There are two ways that will materialise. One is through the licensing role, where there are a range of performance measures that Western Power is required to achieve to satisfy its licence conditions; and under the access arrangement there are a number of performance measures as well that they are required to achieve, but also there are incentive payments for bettering those conditions. You cannot simply run down the asset; you will be in breach of the licence.*

- 9.2 However, the possibility of a disconnect existing between the requirements of a safety regulator on the one hand, and those of an economic regulator on the other, are

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<sup>445</sup> Mr Lyndon Rowe, Chairman, Economic Regulation Authority, *Transcript of Evidence*. 19 October 2011, p16.

themselves undesirable. This fact was discussed with the ERA in evidence before this Committee as follows:<sup>446</sup>

***The CHAIRMAN:** I understand that, but we need to look at where that disconnect is, and there is a definite disconnect. Can I go to question f? In 2009, the Victorian Kilmore East bushfire disaster, which claimed the lives of 119 people, was attributed to a single wooden power pole unassisted failure in a rural area on a day of extreme fire danger. How does the ERA factor the risk to life and property of unassisted wooden power failures where an energy utility allows its principal distribution network asset base to reach the end of its useful and economic life?*

***Mr Rowe:** You are not going to like the answer, but the answer is that the ERA is the economic regulator and EnergySafety is the safety regulator.*

*... the possibility of a disconnect existing between the requirements of a safety regulator on the one hand, and those of an economic regulator on the other, are themselves undesirable.*

***The CHAIRMAN:** No, again, that is a good answer for us, because it does actually say we have got a disconnect here.*

***Mr Watkinson:** Well, you know, to read from the Productivity Commission report, the Productivity Commission will say no, there was no disconnect. It is very important for the safety regulator, the environmental regulator and the health regulator to be separate from the economic regulator. It is very important because if you have overlapping responsibilities, you get confused roles and responsibilities and confused accountability.*

- 9.3 The Committee acknowledges the force of the point made by Mr Watkinson in the above extract. Different regulators do have different accountabilities, and these must not become blurred. However, it appears to this Committee that, in the quest to avoid regulatory confusion and overlap, what has been allowed to occur is the existence of regulatory gaps and inconsistencies. As a matter of principle, it should be possible for two separate regulators to have different accountabilities, and yet operate in a

<sup>446</sup>

*Ibid*, p20.

consistent manner. Indeed, where safety is concerned, it is absolutely vital that there is consistency in treatment by regulators.

- 9.4 Given that almost all of the principal documents analysed in this inquiry are publicly available, it is troubling to this Committee that no one agency of Government has responsibility for a comprehensive oversight role with respect to the performance of electricity utilities in this State.
- 9.5 To the extent that the Committee expected such an oversight role to be exercised by a single agency, it would have been the Office of Energy, which, until recently advised the Minister for Energy on matters of energy policy. However, when this Committee raised the issue of regulatory oversight directly with the Office of Energy in evidence, the response received was not reassuring.<sup>447</sup>

*As a matter of principle, it should be possible for two separate regulators to have different accountabilities, and yet operate in a consistent manner. Indeed, where safety is concerned, it is absolutely vital that there is consistency in treatment by regulators.*

*Dr Biggs: We do recognise the risk of agencies either overlapping or leaving a gap in between. We meet regularly with the ERA to make sure there is a good exchange of information and we meet slightly less frequently, but still regularly, with EnergySafety to make sure that that is not the case. We are not the regulator, though. In both those instances, those two agencies have the regulatory powers, and we rely on them to make sure that those reports are tabled, as they are supposed to be, or published on their websites.*

- 9.6 The Committee finds that the current regulatory framework for electricity network operators is a patchwork, with poorly defined interrelationships between regulators. The Committee also finds that the current electricity licensing arrangements do not clearly mandate that network operators must comply with relevant safety regulations as a pre-requisite to holding a licence. This is both undesirable, and unnecessary.
- 9.7 There is obviously a significant degree of regulatory failure if three generations of “Asset Management System Reviews” and “Licence Performance Audits” submitted to the ERA can exhibit the flaws that have been identified in this Report, some of which have been acknowledged by the ERA itself as potentially significant, and which do not appear to have been identified by the ERA. These flawed assessments have

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<sup>447</sup> Dr Paul Biggs, Acting Coordinator of Energy, Office of Energy, *Transcript of Evidence*. 19 October 2011, p13.

formed the basis of the ERA's assessment of Western Power's efficiency and regulatory compliance for over five years. As the ERA observed in one of its hearings before the Committee, this may simply indicate the existence of a well engineered "garbage in- garbage out" system.<sup>448</sup> More troubling still is the fact that these flawed reports all effectively gave Western Power's asset management systems clean bill's of health - even at times when Western Power was under regulatory notices for non-compliance with respect to its network wooden power pole asset management systems. This point was not lost on Western Power's senior executives in evidence before this Committee as demonstrated by the following extracts:

*The Committee finds that the current regulatory framework for electricity network operators is a patchwork, with poorly defined interrelationships between regulators. The Committee also finds that the current electricity licensing arrangements do not clearly mandate that network operators must comply with relevant safety regulations as a pre-requisite to holding a licence.*

**"Mr Aberle: ...**

*The next page really summarises our asset management systems and points out that, as at now, we argue that they are fit for purpose. The ERA's auditors, GHD, found overall the statements that are there—that is, the systems are adequately defined, the documents are current, the data systems are functioning effectively and Western Power's staff are proficient in the use of those documents. We also received an award in May 2011 from Engineers Australia's Asset Management Council acknowledging our asset management systems. Western Power invited the committee to view its asset management systems 12 months ago. That offer remains open to the committee. It may be a good way of helping you appreciate where we are now as opposed to where we began in 2006. We certainly recognise that there remain opportunities for improvements, as I have said, and it is one of the reasons that that \$40 million that I referred to is being invested in the asset management systems, both back office and infield collection.*

<sup>448</sup>

Mr Paul Kelly, Executive Director, Licensing, Monitoring & Customer Protection, Economic Regulation Authority, *Transcript of Evidence*. 7 November 2011, p10.

*The next slide simply gives you GHD's assessment of adequacy and performance against our asset management system which, as you can see, is very high.*"<sup>449</sup>

*"Mr de Laeter: Certainly we will do that. I will just add that, again, with the latest information about our asset management systems, the GHD report referred to in the last hearing confirms the adequacy and the performance of our asset management system. We received the highest ratings that GHD would give in all of the 12 attributes for the adequacy of our asset management system. In terms of the performance of our people and of our application of those systems, we received not quite full marks, but we received very high rating.*"<sup>450</sup>

*This has the potential to create the impression that the ERA endorses those reports that it publishes but with which the ERA does not directly take issue.*

- 9.8 The ERA posts all compliance-related performance reviews on its website, but does not vouch for their reliability. In addition, the ERA may form an opinion about Western Power's compliance-related performance that is contrary to the published reviews, but there is no obligation on the ERA to publish such contrary opinions in detail or in every instance. It may do this of course, as with the 2009 funding decision discussed above at paragraph 7.1. However, there is no guarantee that contrary opinions of the ERA will be published in the absence of a formal decision being made, or a regulatory notice being issued. This has the potential to create the impression that the ERA endorses those reports that it publishes but with which the ERA does not directly take issue. This potential was raised with the ERA in evidence before this Committee:<sup>451</sup>

*The CHAIRMAN: We have already talked about that last time, and we can talk about that again in the future if need be. What implications should the committee draw from a regulatory system that allows such flaccid assessments to form the basis of regulatory decision making?*

*Mr Rowe: If you were to do this, will errors emerge regardless of the quality of the system? Yes. How do you ensure that you have in place*

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<sup>449</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*. 21 November 2011, p43.

<sup>450</sup> Mr Mark de Laeter, General Manager, Networks, Western Power, *Transcript of Evidence*. 21 November 2011, p6.

<sup>451</sup> Mr Lyndon Rowe, Chairman, Economic Regulation Authority, *Transcript of Evidence*. 7 November 2011, p15.

*a system where you can seek to minimise those potential errors? I think, to repeat myself, having the ERA appoint the auditor would assist. I think the ERA's policy of not having the same auditor for more than three audits in a review, as part of our checks and balances in that process, will assist in ensuring that we are getting good, rigorous, quality audits. The longer the ERA is in existence, the more experience it will have with particular auditors, and the more conscious we will become of the range of quality of those auditors or consultants; and that is part of our responsibility to make sure that we are getting those quality, rigorous reports. But can I guarantee that there will never be something that gets through? No.*

**The CHAIRMAN:** *Clearly this failure is something Parliament needs to address. But where does the buck stop?*

**Mr Rowe:** *As I understand what is currently before us, if all of that information was before the auditor when they undertook the audit, then clearly the recommendation is incorrect.*

*This Report has highlighted a number of instances where the Auditor General may have been either intentionally, or carelessly, misled by Western Power.*

- 9.9 In this respect, the Committee has also had cause to question whether Western Power has observed its statutory obligation of full disclosure to the Auditor General. This Report has highlighted a number of instances where the Auditor General may have been either intentionally, or carelessly, misled by Western Power. The Committee is troubled by the fact that the Auditor General signed off on the 2010/2011 Annual Report which talked about “*Managing the Network*”, only to have Western Power make a public statement barely a week later that its “*network was reaching the end of its useful and safe life*”, requiring 20 years of increased remedial investment, beginning with a five year \$1.222 billion program. This concern is exacerbated by the finding that the Auditor General has never conducted a performance audit on Western Power’s asset management systems practices and processes. The Committee is further concerned to observe that Western Power’s key asset management systems have been subject to sustained critique by both of its principal regulators for over five years. This sustained critique has included repeated adverse regulatory compliance notices and orders.
- 9.10 Western Power’s response to this sustained regulatory critique has consistently been that it is “*managing the network*”, providing “*the solution*” to the challenge, its asset management systems are “*fit for purpose*”, and it is well advanced on its “*compliance*

*journey*". Despite these management assurances, on 15 September 2011, barely a week after signing of on its most recent Annual Report, Western Power announced to the world that its "*network was reaching the end of its useful and safe life*", without the Auditor General once expressing a qualified opinion about its financial reports in any of the previous five financial years. This Committee finds that the Parliament is owed a detailed and plausible explanation of these anomalies by both Western Power, and the Auditor General.

- 9.11 In 2009, the ERA made the findings highlighted at paragraph 7.1 above about managerial and process deficiencies within Western Power, leading to what amounted to a financial penalty of \$261 million, without this fact being noted in the community generally. The fact appears to have gone without commentary in either the media or the Parliament for over two years. In part, this seems to be because of the way in which the document in question was written.<sup>452</sup> The ERA's diagnosis is located at paragraph 471 of the document, and the financial penalty is located at paragraph 744. Given such an inaccessible communication style, it is perhaps unsurprising, but nevertheless regrettable, that most people failed to appreciate the significance of the ERA's decision at the time.

*This Committee finds that the Parliament is owed a detailed and plausible explanation of these anomalies by both Western Power, and the Auditor General.*

- 9.12 The Committee is also concerned that, as noted in paragraph 8.55 above, the ERA withdrew Part 7 of its 2009 Notice of Compliance Failure served on Western Power prematurely and without due regard to relevant factors. To some extent this matter has been subsequently addressed by the ERA,<sup>453</sup> but it appears to this Committee to be an example of poor regulatory practice.
- 9.13 The Committee believes that, if the assessment of the ERA's Chair highlighted in paragraph 5.77 above is correct, given that audit reports are presently contracted by Western Power, and that it is Western Power who submit the reports to the ERA, the buck must stop with the Board and management of Western Power for any misleading or careless misstatement in audit reports lodged with its regulators. At present the only statutory duty not to engage in false or misleading conduct is stipulated in the *Electricity Corporations Act 2005* s16, relates to the corporation's disclosures to the

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<sup>452</sup> Economic Regulation Authority (2009) [\*Final Decision on Proposed Revisions to the Access Arrangement for the South West Interconnected Network submitted by Western Power\*](#). Government of Western Australia. 4 December 2009.

<sup>453</sup> Economic Regulation Authority (2011) "[\*Information - Electricity Networks Corporation \(t/a Western Power\) 2011 Asset Management System Review Report\*](#)". 9 December 2011.



Treasurer, the Minister responsible, and fellow directors. This statutory formulation is much weaker than that which applies to trading corporations generally.

### *Recommendation 2*

- 9.14 The Committee believes that the evidence presented in this Report highlights an urgent need for a whole-scale review of the current regulatory framework applicable to energy utilities in Western Australia. Given that the *Energy Corporations Act 2005* has been fully operational for five years, the timing of such a review is probably appropriate. As such, the Committee makes the following recommendation:

**Recommendation 2: The Committee recommends that the Government commission a comprehensive review of the current regulatory framework applicable to electricity network operators in Western Australia. Any such review should consider, but not be in any way restricted to, each of the issues listed at Appendix 4 to this Report.**

- 9.15 In addition, given the Office of Energy's failure to recognise the need for a review of the current regulatory framework applicable to energy utilities in Western Australia, together with its apparent failure to highlight the present regulatory ambiguities, the Committee strongly suggests that any successor agency to the Office of Energy should be immediately tasked with ongoing oversight of the regulatory framework applicable to energy utilities.

*This Committee has repeatedly been advised that Western Power has an inappropriate culture of compliance with respect to both its regulators, and its regulatory obligations.*

- 9.16 This Committee has repeatedly been advised that Western Power has an inappropriate culture of compliance with respect to both its regulators, and its regulatory obligations. Both the ERA and EnergySafety have separately made particular reference, in evidence before this Committee, to the singular challenge that each agency experiences in regulating Western Power, as compared to all other operators in both the electricity and gas markets. These observations indicate a corporate culture of compliance that is out of step with all other operators in both the electricity and gas markets. Such observations are deeply troubling to this Committee, as they should be to the Parliament and people of Western Australia. Both regulators have also, separately referred to a "*silo-ed*" corporate culture that reflects an absence of shared corporate purpose or effective corporate leadership.
- 9.17 In addition, this Committee's direct experience of Western Power brings it to the conclusion that the present management culture within Western Power at the highest

levels, is one that has difficulty engaging meaningfully with facts. Many of the senior management group within Western Power held equivalent positions in the antecedent entity prior to disaggregation. The Committee doubts whether this management group is either able, or willing, to make the paradigm shift required to secure the safe and efficient operation of Western Power into the future.

- 9.18 The Committee's findings in this Report should be deeply troubling to the Legislative Council in and of themselves. However, the Committee is also concerned that what has been described in this Report may be a case study of what is happening more broadly within Western Power. The Committee acknowledges that Western Power's wooden power pole inspection regime has more recently shown marked signs of improvement. However, the Committee notes that this operational activity has been largely contracted out. This does not, of itself, provide assurance that Western Power's corporate and managerial culture is undergoing the necessary transformation. Unless, and until, there is a radical change in Western Power's corporate culture of compliance, and its management paradigm, the underlying issues within Western Power which find expression in such deeply troubling compliance and accountability failures as are enumerated in this Report, are likely to remain unaddressed.

*The Committee doubts whether this management group is either able, or willing, to make the paradigm shift required to secure the safe and efficient operation of Western Power into the future.*

### *Recommendation 3*

- 9.19 It should be noted that the vast majority of the information on which this Report has been based is publicly available. The type of independent corporate structural and operational review of Western Power that appears to this Committee to be warranted in light of the findings in this Report, is beyond the resources of this Committee. Accordingly, the Committee makes the following recommendation:

**Recommendation 3: The Committee recommends that, as a matter of urgency, the Government commission a wide-ranging independent inquiry into the structure, culture and operations of Western Power since its disaggregation.**

## 10 PARLIAMENTARY ACCOUNTABILITY

- 10.1 In evidence to this Committee, the Managing Director of Western Power explained how Western Power viewed its accountability to the Parliament in the following extract:<sup>454</sup>

***The CHAIRMAN:** Yes, but with all due respect, Mr Aberle, that is the minister saying something; that is not you, Western Power, saying something. We have been running an argument for some time about the information that has been available to the minister. So, we are not really interested in what the minister has to say; we are interested in what you have to say.*

***Mr Aberle:** The minister's information obviously comes from us. According to the Electricity Corporations Act, under which we operate, our accountability framework is clearly laid out therein, and the model adopted reflects the traditional view of the Westminster model of accountability; namely, the responsible minister is accountable to Parliament, the board is accountable to the minister for the performance of the organisation, and the chief executive officer is accountable to the board for the day-to-day management of the operation of the business. The minister's and the board's respective accountabilities are expressly reflected in part 5 of the act; namely, the board must provide various reports and information to the minister who, in turn, must provide reports to Parliament. That includes the statement of corporate intent that I have referred to, quarterly reporting, annual reporting and responses to parliamentary questions on a regular basis. Examples of several of those I have just given you.*

*... the intention of the Act was to strengthen the existing accountability to the Parliament and people of Western Australia, and not to weaken it in any way.*

- 10.2 The suggestion made by the Managing Director in the above extract that Western Power and its senior officers are somehow not directly accountable to the Parliament is not supportable. The Committee notes with interest that, in the second reading debate on the Electricity Corporations Bill 2005 in the Legislative Council, it was made clear that the intention of the Act was to *strengthen* the existing accountability to the Parliament and people of Western Australia, and not to weaken it in any way.

<sup>454</sup> Mr Doug Aberle, Managing Director, Western Power, *Transcript of Evidence*, 21 November 2011, p3.

In addition, it is also clear from a reading of the *Electricity Corporations Act 2005* as a whole, that electricity corporations will remain subject to ordinary principles of parliamentary accountability.

10.3 When the Electricity Corporations Bill 2005 was debated in the Legislative Council, a considerable part of the debate in our Chamber centred on the question of reinforcing, within the Act, the notion of the paramountcy of the Parliament. The Committee further notes that Western Power:

- is incorporated under a State Act of Parliament;
- features separately in the State Budget Papers;
- appears in its own right before the annual Estimates Committees of both Houses of Parliament;
- tables its Statements of Corporate Intent and its Annual Report before both Houses of the Parliament; and
- gives an account of its Annual Report each year to the Estimates Committee of the Legislative Council.

*... statutory corporations that discharge public functions are nevertheless “emanations of the State” - regardless of a selective reading of individual statutory provisions.*

10.4 The Committee accepts, that sections 5 and 6 of the *Electricity Corporations Act 2005* provide that electricity corporations incorporated under that Act, including Western Power, are not agents of the State, and do not come under the *Public Sector Management Act*. However, as the Federal Court has recently observed, including in a 2010 decision in the decision in *Sportsbet Pty Ltd v New South Wales*, statutory corporations that discharge public functions are nevertheless “*emanations of the State*” - regardless of a selective reading of individual statutory provisions.<sup>455</sup> This reflects the view of the full court joint judgement of the High Court of Australia about the relationship of Commonwealth agencies to the Commonwealth Parliament in the case of *Lange v Australian Broadcasting Corporation* (1997) 189 CLR 520:<sup>456</sup>

*Similarly, those provisions which prescribe the system of responsible government necessarily imply a limitation on legislative and executive power to deny the electors and their representatives information*

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<sup>455</sup> *Sportsbet Pty Ltd v New South Wales* [2010] FCA 604 (16 June 2010), at para 11.

<sup>456</sup> At 561, per Brennan CJ, Dawson, Toohey, Gaudron, McHugh, Gummow and Kirby JJ.

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*concerning the conduct of the executive branch of government throughout the life of a federal Parliament. Moreover, the conduct of the executive branch is not confined to Ministers and the public service. It includes the affairs of statutory authorities and public utilities which are obliged to report to the legislature or to a Minister who is responsible to the legislature. In British Steel v Granada Television, Lord Wilberforce said that it was by these reports that effect was given to "[t]he legitimate interest of the public" in knowing about the affairs of such bodies.*

- 10.5 These views were expressly referred to with approval in a State parliamentary context, in the High Court decision in *Egan v Willis* (1998) 195 CLR 424.<sup>457</sup>

*To suggest that Western Power is not directly accountable to the Parliament would be to suggest that Western Power is not accountable to the people of Western Australia. This Committee rejects out of hand any suggestion that, as presently constituted, Western Power and its management are not directly accountable to the Parliament of Western Australia for its actions.*

- 10.6 All of the machinery of government is directly accountable to the Parliament - including Western Power. And this is as it should be, given that in our political system, the people are the highest authority in the State, and it is the people who elect the Parliament. To suggest that Western Power is not directly accountable to the Parliament would be to suggest that Western Power is not accountable to the people of Western Australia. This Committee rejects out of hand any suggestion that, as presently constituted, Western Power and its management are not directly accountable to the Parliament of Western Australia for its actions. This accountability is in addition to any other accountability mechanisms provided in relevant legislation, and is in no way supplanted by other statutory accountability mechanisms.

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<sup>457</sup>

At 451 per Gaudron, Gummow and Hayne JJ



**APPENDIX 1**  
**LIST OF SUBMISSIONS**





# APPENDIX 1

## LIST OF SUBMISSIONS

No.	Details	Date received	Status
1.	Ms Anne Hill, Acting Coordinator of Energy, Office of Energy	13/10/2009	Public
2.	Cr Logan K Howlett, Mayor, City of Cockburn	15/10/2009	Public
3.	Mr Rod Wallington, Risk & Emergency Management Coordinator, Chief Bush Fire Control Officer, City of Gosnells	22/10/2009	Public
4.	Mr Peter Clarke, Chief Executive Officer, Shire of Yilgarn	22/10/2009	Public
5.	Cr Helen Dullard, Shire President, Shire of Mundaring	26/10/2009	Public
6.	Mr Henry Van Der Ende, Chief Executive Officer, Shire of Dumbleyung	26/10/2009	Public
7.	Mr Stuart Cole, Chief Executive Officer, City of Belmont	26/10/2009	Public
8.	Mr Geoff Eves, Director Infrastructure, City of Stirling	27/10/2009	Public
9.	Cr Heather Henderson, Mayor of Subiaco, City of Subiaco	27/10/2009	Public
10.	Mr Gary Clark, Chief Executive Officer, Shire of Brookton	27/10/2009	Public
11.	Mr Sam Mastrolembo, Deputy Chief Executive Officer, Shire of Toodyay	28/10/2009	Public
12.	Mr Gary Evershed, Chief Executive Officer, Shire of Augusta, Margaret River	28/10/2009	Public
13.	Mr Peter Bentley, Manager Administration & Customer Service, Shire of Broomehill-Tambellup	29/10/2009	Public
14.	B W Seale, Chief Executive Officer, Shire of Menzies	29/10/2009	Public
15.	Mr Doug Forster, Acting Chief Executive Officer, City of Perth	29/10/2009	Public
16.	Cr Charlie Zannino, Mayor, City of Swan	30/10/2009	Public
17.	Mr Roy Bailey, Special Projects Officer, City of Melville	30/10/2009	Public
18.	Mr Ian Daniels, Director Technical Services, Shire of Murray	02/11/2009	Public
19.	LG Calneggia, Acting Chief Executive Officer, Shire of Wagin	02/11/2009	Public
20.	Mr Doug Pearson, Director of Technical Services, City of Bayswater	02/11/2009	Public
21.	Mr Jason Walsh, General Manager, Delta Corporation Limited	03/11/2009	Public

No.	Details	Date received	Status
22.	Mr DJ Donnelly, Private Citizen	03/11/2009	Public
	Mr DJ Donnelly, Private Citizen (supplementary information)	08/11/2010	Public
	Mr DJ Donnelly, Private Citizen (supplementary information)	16/05/2011	Public
23.	Mr Clem Kerp, Chief Executive Officer, Shire of Goomalling	05/11/2009	Public
24.	Mr Brian Hollis, Policy Advisory/ Information Coordinator, Insurance Council of Australia	05/11/2009	Public
25.	Mr Trevor Radford, Local Bush Fire Brigade, Shire of Donnybrook/Balingup	05/11/2009	Public
26.	Mr Gregg Harwood, Director Of Community and Regulatory Services, Shire of Denmark	02/11/2009	Public
27.	Mr Les Crawford, Manager Engineering Infrastructure, City of South Perth	05/11/2009	Public
28.	Mr Robert McGuinness, Private Citizen	05/11/2009	Public
29.	Mr Alan Hill, Helena River Catchment Group	09/11/2009	Public
30.	Mr Bill Price, Chief Executive Officer, Shire of Westonia	10/11/2009	Public
31.	Mr Gary Hunt, Chief Executive Officer, City of Joondalup	12/11/2009	Public
32.	Mr Peter Eaton, Product Manager, Rocla Poles	18/02/2010	Public
33.	Mr Mike Norton, President, WA Farmers Federation	19/03/2010	Public
34.	Mr Peter Rowson, Managing Director, DBR Electrical Contractors	30/06/2010	Public
35.	Hon Judi Moylan MP, Federal Member for the Seat of Pearce	27/08/2010	Public
36.	Mr Kyle Kutasi, General Manager, National Electrical and Communications Association WA (NECA)	07/04/2011	Public

**APPENDIX 2**  
**SUMMONS TO WESTERN POWER**



## APPENDIX 2

### SUMMONS TO WESTERN POWER

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*Parliamentary Privileges Act 1891, ss 4, 5*

#### SUMMONS TO ATTEND TO PRODUCE DOCUMENTS

Take notice that you –

Mr Doug Aberle  
Managing Director of Western Power  
at 363-365 Wellington Street, Perth, Western Australia

by resolution passed on 20 October 2010 by the Standing Committee on Public Administration, in relation to an Inquiry into Electricity Transmission and Distribution Management by Western Power and Horizon Power, are required to give your attendance before the Clerk of the Legislative Council by **12 midday on Monday, 29 November 2010** at Parliament House, Perth, and produce the documents listed below –

#### DOCUMENTS TO BE PRODUCED:

1. Original documents, correspondence and records; and print-outs of electronic records with respect to all pole incidents, equipment failures, failure reports, maintenance records and installation records for power infrastructure within the Shire of Toodyay that covers the period 1 January 1996 to 31 May 2009.
2. Original documents, correspondence and records; and print outs of electronic records with respect to all pole incidents, equipment failures, failure reports, maintenance records and installation records for power infrastructure within the Shire of Cranbrook that covers the period 1 January 1996 to 31 December 2005.

Issued by **Mr Nigel Lake**, Acting Clerk of the Legislative Council, under section 5 of the *Parliamentary Privileges Act 1891* on 20 October 2010 –

A handwritten signature in black ink, appearing to be "Nigel Lake", written over a horizontal line.

Acting Clerk of the Legislative Council

Authorised by **Hon Jon Ford MLC** under section 5 of the *Parliamentary Privileges Act 1891* on 20 October 2010 –

A handwritten signature in black ink, appearing to be "Jon Ford", written over a horizontal line.

Deputy Chairman of the Standing Committee on Public Administration

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pc.wpp.101013.summons.Western Power (A249593)

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**APPENDIX 3**  
**EXTRACT FROM ANSWERS TO QUESTIONS ON NOTICE**





## APPENDIX 3

### EXTRACT FROM ANSWERS TO QUESTIONS ON NOTICE

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Please find below by way of example a number of references:

**Annual Report 2011:**

- *"The Western Power network is aging and issues such as climate change and the shift to a low carbon economy continue to influence public policy debate in the energy industry."* Page 10.

**Annual Report 2010:**

- *"An ageing network with 30 per cent of the network more than 40 years old."* Page 7.
- *"More than 30 per cent of Western Power's network is more than 40 years old. The network includes 630,000 wooden poles that must be inspected and maintained to ensure public safety and reliability of supply."* Page 17.

**Annual Report 2009:**

- *"The impact of underinvestment in our infrastructure will have a direct link to lesser levels of reliability that we will be able to deliver to our customers."* Page 1
- *"Western Power is preparing for a challenging year ahead as the impact of the deteriorating economic climate and ageing asset base places a number of demands on the business."* Page 1
- *"An ageing network with 30 per cent of the network more than 40 years old."* Page 3.
- *"Securing the second agreement with the regulator will provide certainty around the investment in the network until 2011/12. The critical issue moving forward is the age of our assets (30 per cent of our assets are more than 40 years old) with increased investment necessary if we are to maintain the current levels of reliability at a time when funding sources are under significant pressure due to the global financial crisis."* Page 5.
- *"More than 30 per cent of the network is over 40 years old with significant levels of investment required"* page 11.

**Annual Report 2007:**

- *"With the support of the new Board and Executive Committee, we faced the challenges of our usual business activities as well as undertaking major project work to meet accelerated growth and address many years of underinvestment in the network."* Page 4.

**Annual Report 2005:**

- *"Long-term planning is currently underway to enable Networks to meet changing customer expectations, increase safety standards and manage a continually growing network in a new regulatory framework. To meet these demands and with the need to replace ageing infrastructure, Networks will invest \$1.6 billion in capital works associated with transmission and distribution networks over the next four years."* Page 7.

**Western Power Statement of Corporate Intent 2010/11 (tabled in Parliament):**

- *"An ageing asset base which will require significant investment including investments that will facilitate assets operating beyond their original design life expectancy in order to maintain existing levels of service."* Page 2.

**Western Power Statement of Corporate Intent 2011/12 (tabled in Parliament):**

- *"Aging infrastructure which requires significant investment in order to maintain existing levels of service."* Page 3.

**Other references to Western Power's aging network include:**

**Annual Planning Report 2010/11:**

- *"Since the 1950s, the SWIS has been developed to allow the transmission of electrical energy generated by large, coal or gas fuelled power stations which are located remotely from centres of demand. Much of this infrastructure is now ageing and coming to the end of its useful life."* Page 33

**Annual Planning Report 2011/12:**

- *"Since the 1950s, the SWIS has been developed to allow the transmission of electrical energy generated by large, coal or gas fuelled power stations which are located remotely from centres of demand. Much of this infrastructure is now ageing and coming to the end of its useful life."* Page 38

**Western Power transmission and distribution annual asset management report 2006**

- *"Age is a useful initial indicator of an asset's condition. Many of Western Power's assets were installed in the 1960s and so are approaching the age where widespread replacement can be expected."* Page 9

**Media Release:*****“Reliability a key focus for Western Power” - 7<sup>th</sup> April 2009:***

- *“Mr de Laeter, said Western Power’s plan for improving reliability is to continue to invest in ongoing maintenance as well as installing multiple ‘intelligent devices’ in the network.”*
- *“The number of faults can be reduced by spending more on maintaining what is now a relatively old network. We need to make up for a decade of under-investment across a very big area.”*

**Submission to the Economic Regulation Authority (ERA) by the Chamber of Commerce and Industry:**

- *“CCI understands that there was significant underinvestment in the SWIN for many years, across successive governments, while the electricity transmission utility was under public ownership. This has resulted in a significant number of assets approaching end of life and consequently require upgrading and/or replacing”.<sup>1</sup>*

**Access Arrangement Information for the SWIS Submitted to ERA on 8 May 2006<sup>2</sup>:**

- *“Unfortunately, Western Power’s capital expenditure budget for its network business has remained at a level that has barely allowed the business to undertake new customer works.” Page 55.*
- *“At current levels of capital expenditure, Western Power is replacing less than 0.5% of its system per year. This level of capital expenditure is unsustainable given that a typical network business with asset lives of 40-50 years would expect on average to replace between 2% and 2.5% of its capital base per annum. Unsurprisingly, therefore, Western Power has a growing backlog of assets that are identified for repair and replacement.” Page 56.*
- *“Western Power has identified \$40 million of backlog replacement capital expenditure in the transmission network. Whilst it is not unusual for a network business to operate with some element of backlog expenditure, in Western Power’s view it is important that the current level of backlog is not allowed to increase further. Arresting the growth in the replacement backlog will itself require an increase in replacement capital expenditure in the forthcoming access arrangement period.” page 56*

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<sup>1</sup> Chamber of Commerce & Industry submission 17 December 2008,  
<http://www.erawa.com.au/cproot/7193/2/20081219%20D0812817%20Public%20Submission%20-%20Access%20Arrangement%20Review%20Process%20-%20Chamber%20of%20Commerce%20and%20Industry.pdf>

<sup>2</sup><http://www.erawa.com.au/cproot/5552/2/Access%20Arrangement%20Information.pdf>

- *"The advancing age of Western Power's transmission network means within the next 10 to 15 years, there will be a need to replace much greater volumes of assets than has been the case in the last ten years."* Page 57.

Western Power has articulated the issues it faces with an aging network at a number of public forums, including its latest Access Arrangement development (AA3).

As part of Western Power's extensive AA3 consultation process, forums have been held in Perth, Geraldton, Kalgoorlie, Albany and Bunbury over the past 12 months.

At these forums, Western Power discussed extensively the legacy of underinvestment in the network and aging infrastructure and the risk to safety.

**Media commentary:**

- *"Well, anyone who doesn't know that Western Power's aging network is in a state of near crisis, has been asleep under a fallen power pole for the last few years. The utility has been hamstrung for many years by financial constraints. In the last few years it's actually turned a lot of that around and it's been doing a lot of work to upgrade its network..."* Paul Murray, 6PR Mornings Program, 16 September 2011.

**Parliament:**

- *"Western Power is making a very significant effort, confronted with the twin problems of, on the one hand, an ageing distribution system and, on the other, new demands for quantity and quality of electricity that were not there when the system was designed and built. The problem is 30 to 40 years old."* Hon Eric Ripper MLA, 22 May 2003
- *"Western Australia's electricity network is nearly 40 years old...Maintenance stability of the network must be a major priority for Western Power. It is a problem that has developed over decades and will take many years to completely resolve."* Hon Eric Ripper MLA, 4 June 2003
- *"Our electricity network is ageing; it was designed for an earlier era when people wanted to run lights and a fridge..... They now need better quality power and more of it. Some investment needs to be put into the network."* Hon Eric Ripper MLA, 20 November 2003

- *"One of the issues that has given rise to the recent spate of problems is the combination of ageing and deteriorating network together with an unusual spate of fires, storms and other activity, which have exposed the deficiencies in the network."* Hon Eric Ripper MLA, 20 November 2003
- *"We have an ageing power system. We need new, modern power stations on the system. We need investment in the network."* Hon Eric Ripper MLA, 3 March 2004
- *"As an energy minister, I was warned in the late 1990's that Western Power's distribution and transmission system was essentially 40 to 50 years old; it was ageing and problems would accelerate. I was warned quite properly and the Government was warned."* Hon Colin Barnett MLA, 3 March 2004
- *"The electricity network in Western Australia has been built up over decades. It represents a very significant investment of taxpayers' funds. Nevertheless, in many place the network is ageing. It was designed for an earlier era when there were not the same levels of power demand as there are today. This problem has not emerged in the past three years; it has been building up in Western Australia over decades."* Hon Eric Ripper MLA, 4 March 2004
- *"We have an ageing electricity network. We need to invest more money in that network. In the history of Western Power its capital has gone to generation, because if capital does not go into generations, there are immediate power problems. If the capital does not go into networks, there is no immediate power problem but there is a gradual deterioration over the years. The chickens are now coming home to roost. We have had a gradual deterioration over a decade or more and we are now starting to pay the price for that decade or more of neglect and lack of investment in the network".* Hon Eric Ripper MLA, 24 March 2004
- *"The Nationals WA have campaigned long and hard for increased investment in the state's electricity infrastructure. Our primary concern has always been the provision of decent quality, reliable electricity supplies to regional Western Australia. The Nationals have consistently raised the issue of the appalling state of the south west interconnected system network in regional Western Australia."* Mr Max Trenorden MLA, 10 May 2006
- *"History will show that a range of executive governments have convinced Western Australians that ample funding was being invested in maintaining the south west interconnected system network, yet recent years have*

*provided example after example to prove that this could not have been the case.*" Mr Max Trenorden MLA, 10 May 2006

- *"The Nationals WA are concerned that replacing aged infrastructure, improving public safety and improving reliability for country SWIS customers will not receive the priority it deserves."* Mr Max Trenorden MLA, 10 May 2006
- *"It was not until disaggregation that transparency underinvestment in its plant and equipment for years and years, It was not until the disaggregation that transparency occurred so that we could tell where the vast amounts of money going into the old aggregated model of Western Power were actually being spent. Today Verve Energy will tell us that one of the biggest dynamics that is causing the increased cost of generation is the need to address the historic underinvestment in plant and equipment."* Hon Alan Carpenter MLA, 8 April 2008
- *"Disaggregation was not the cause of historic underinvestment in plant and equipment in what was formerly Western Power; the causes were policy failure, refusal to engage with the big issues confronting Western Power and refusal to make the decision to bring about reform....The government inherited a power network that was collapsing around its ears because of severe underinvestment by the previous government...The government faced years of investment catch-up to make the network reliable..."* Hon Alan Carpenter MLA, 8 April 2008
- *"During our period in government we had to deal with the former minister's underinvestment in the electricity network."* Hon Eric Ripper MLA, 25 November 2008
- *"We have significant problems with infrastructure; we have ageing plant and infrastructure. The fact that Western Power's second access arrangement bid is for more than \$6 billion for maintenance and care of our infrastructure shows just how challenging it is".* Hon Peter Collier MLC, 15 June 2010

**Annual Report 2011:**

- *"The Western Power network is aging and issues such as climate change and the shift to a low carbon economy continue to influence public policy debate in the energy industry."* Page 10.

**Annual Report 2010:**

- *"An ageing network with 30 per cent of the network more than 40 years old."* Page 7.
- *"More than 30 per cent of Western Power's network is more than 40 years old. The network includes 630,000 wooden poles that must be inspected and maintained to ensure public safety and reliability of supply."* Page 17.

**Annual Report 2009:**

- *"The impact of underinvestment in our infrastructure will have a direct link to lesser levels of reliability that we will be able to deliver to our customers."* Page 1
- *"Western Power is preparing for a challenging year ahead as the impact of the deteriorating economic climate and ageing asset base places a number of demands on the business."* Page 1
- *"An ageing network with 30 per cent of the network more than 40 years old."* Page 3.
- *"Securing the second agreement with the regulator will provide certainty around the investment in the network until 2011/12. The critical issue moving forward is the age of our assets (30 per cent of our assets are more than 40 years old) with increased investment necessary if we are to maintain the current levels of reliability at a time when funding sources are under significant pressure due to the global financial crisis."* Page 5.
- *"More than 30 per cent of the network is over 40 years old with significant levels of investment required"* page 11.

**Annual Report 2007:**

- *"With the support of the new Board and Executive Committee, we faced the challenges of our usual business activities as well as undertaking major project work to meet accelerated growth and address many years of underinvestment in the network."* Page 4.

**Annual Report 2005:**

- *"Long-term planning is currently underway to enable Networks to meet changing customer expectations, increase safety standards and manage a continually growing network in a new regulatory framework. To meet these demands and with the need to replace ageing infrastructure, Networks will invest \$1.6 billion in capital works associated with transmission and distribution networks over the next four years." Page 7.*

**Western Power Statement of Corporate Intent 2010/11 (tabled in Parliament):**

- *"An ageing asset base which will require significant investment including investments that will facilitate assets operating beyond their original design life expectancy in order to maintain existing levels of service." Page 2.*

**Western Power Statement of Corporate Intent 2011/12 (tabled in Parliament):**

- *"Aging infrastructure which requires significant investment in order to maintain existing levels of service." Page 3.*



**APPENDIX 4**  
**RECOMMENDATIONS FOR LEGISLATIVE/REGULATORY**  
**REFORM**



## **APPENDIX 4**

### **RECOMMENDATIONS FOR LEGISLATIVE/REGULATORY REFORM**

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1. Where energy utilities are required to undergo regulatory and licence-related audits, such audits should be conducted by reviewers that are selected and engaged by the ERA, at the expense of the relevant utility. In the conduct of such audits, there should be absolute clarity that the ERA is the principal for the life of the engagement. This is consistent with current practice relating to the Auditor General.
2. It should be expressly required as a component of any energy licence, that the licensee must comply with their statutory energy safety obligations. The relevant audit reviewers should be required to seek information about this aspect from the energy safety regulator as part of any such review. EnergySafety should be expressly authorised to make full disclosure to the auditor in such cases.
3. Public utilities should be required to appoint a statutory officer holding the title of “Chief Engineer”. This person should have the necessary technical qualifications and experience to occupy such a position. The Chief Engineer should report directly to the Board and/or Minister. A Chief Engineer’s Report on the “State of the Infrastructure” of the utility should be required in each year’s Annual Report. In this “State of the Infrastructure Report”, the Chief Engineer should be required to report specifically on the operational safety performance of the infrastructure over the financial year in question, and be required to certify the infrastructure’s capacity for operational safety (with or without qualification) over the prospective financial year.
4. Other than the Chief Engineer, executive appointments should be made on the basis of managerial and/or administrative skills, qualifications and ability.
5. There should be a statutory requirement that Executive Directors of any utility be a “fit and proper person” as is currently the case in the corporate sphere generally.
6. The ERA and EnergySafety should have the power to bring an action to have an Executive Director of a utility declared to be a not “fit and proper person”. An application for such a declaration should be to either the State Administrative Tribunal or the District Court at the first instance.
7. The Electricity Corporations Act 2005 should be amended so that a general prohibition on making false and misleading statements, similar to s1308 of the Corporations Act 2001

(Cth) applies to corporations established under that Act. The current provisions are not sufficiently broad in their application

8. Section 18C of the Energy Coordination Act 1994 should be revised to make the “order-making” process more flexible and direct in its application. For example, the existing provision could be amended to allow an Inspector to issue an Order requiring a network operator to inspect a number of components (that is, poles), or replace or repair them (includes reinforce a pole) if these components did not meet the in-service design criteria, or are unsafe.
9. A provision should be introduced into the Energy Coordination Act 1994 whereby a clear statement of intent by a network operator that they will not comply with a requirement in an Order may be deemed as equivalent to actual failure to comply with the requirement even if the date for compliance has not been reached;
10. A provision should be introduced whereby minimum allowable in-service design criteria are required under the Energy Coordination Act 1994, by reference to industry standards, for certain key components in a distribution and transmission system, that is, specification of the minimum safe in-service design parameters before replacement of the component is required. This is currently what happens with respect to accounting standards.
11. A new offence should be introduced into the Energy Coordination Act 1994 where a component fails and causes injury to a person, or damage to property, as a result of it not being replaced before it reaches its minimum in-service design strength.
12. A system should be introduced into the Energy Coordination Act 1994 whereby civil penalties can be imposed for failures relating to safety that require proof only on the civil standard of the balance of probabilities (for example, Division 7 of the Model Work Health and Safety Bill).
13. A system should be introduced into the Energy Coordination Act 1994 whereby regulators have express powers to seek an injunction; for example, if a company or person does not comply with an Order or provision of the relevant legislation.
14. A provision should be introduced into the Energy Coordination Act 1994 establishing an obligation for Directors and Officers of a network operator to ensure public electrical safety compliance (for example, s27 of the Model Work Health and Safety Bill).
15. Penalties under the Energy Coordination Act 1994 should be increased to be comparable to similar corporate penalties in other contexts (for example, Corporations Act 2001 penalties). The current lack of penalty equivalence has undesirable competitive neutrality implications.
16. Network operators should be open and responsible for their public safety performance. Failure to meet acceptable safety and operating standards should be penalised. Simple

performance measures, including those listed below, should be reported publicly, on a quarterly and annual basis, with reference to national benchmarks:

- Unassisted wood pole failures;
  - Damage or electric shocks;
  - Fires where damage occurs to network assets or other property;
  - Unassisted conductor failures;
17. Network operators should report on the basis of transparent definitions of terms (for example, unassisted failures), as approved by the Director of Energy Safety.