KARARA POWER PTY LTD
TRANSMISSION LICENCE ETL 6
PERFORMANCE AUDIT
ASSET MANAGEMENT REVIEW REPORT

Prepared by Kevan McGill
Date 9 October 2016

William Madzikanda
Senior HV Engineer
Karara Mining Pty Ltd
L9, 216 St George Terrace
PERTH WA 6000

Dear Mr Madzikanda

Performance Audit & Asset Management Review Electricity Licence

The fieldwork on the performance audit of Transmission Licence ETL 6 for the audit period (1 Jul 2013 to 30 Jun 2016) is complete and I am pleased to submit the report to you. The report reflects my findings and opinions.

In my opinion, the Licensee has maintained a good level of compliance with the Licence conditions and integrity with the Licensee's reporting obligations. There are 2 non-compliances noted.

In my opinion, the Licensee maintained, in all material aspects, control procedures in relation to the Transmission licence (ETL 6) for the audit period on the relevant clauses referred to within the scope section of this report.

In my opinion, the Licensee maintained, in all material aspects, effective control procedures and an effective asset management system in relation to the Transmission licence (ETL 6) for the review period on the relevant clauses referred to within the scope section of this report. There are some improvements necessary.

Yours sincerely

Kevan McGill
Director

Date 9 October 2016

CONTENTS

1 Executive Summary

This performance audit and asset management system review was conducted in accordance with the guidelines issued by the Economic Regulation Authority (ERA*)* for the audit period (1 Jul 2013 to 30 Jun 2016)

1.1 OVERALL CONCLUSION

In my opinion, the Licensee has maintained a good level of compliance with the licence conditions. There were 2 non-compliances requiring corrective actions. There are no issues with the integrity of reporting to the *ERA* or other statutory organisations.

In my opinion, the Licensee maintained, in all material aspects, effective control procedures in relation to the Transmission Licence (GTL 6) for the audit period based on the relevant clauses referred to within the scope section of this report.

In my opinion, the Licensee maintained, in all material aspects, effective control procedures and an effective asset management system in relation to the Transmission licence (ETL 6) for the review period on the relevant clauses referred to within the scope section of this report. There are some improvements necessary.

1.2 SUMMARY OF SIGNIFICANT RESULTS

1.2.1 AUDIT

While there are a small number of issues that created the non-compliances the Licensee has put control processes in place to rectify the causes of the non-compliances.

1.2.2 ASSET MANAGEMENT SYSTEM REVIEW

There are a small number of issues that would improve the effectiveness of the asset management system. The churn of staff in the review period has not assisted making the changes necessary.

1.3 AUDIT PERIOD

This audit covers the period 1 Jul 2013 to 30 Jun 2016. The previous audit/review period was 27 October 2010 to 30 June 2013.

1.4 THE LICENSEE

Karara Power (*Karara*) holds an Electricity Transmission Licence (ETL 6) issued by the Economic Regulation Authority under the Electricity Industry Act 2004. This performance audit was conducted in accordance with the guidelines issued by the Economic Regulation Authority (ERA*)* to assess Karara's level of compliance with the licence conditions.

The line from Eneabba to Three Springs (about 98km) was transferred to Western Power in the audit period (2013). This reduced the licensed assets to 78 Km from 176 Km. Western Power operated and maintained this segment both before and after the transfer. The Licensee had no control over this segment at any time.

The Licensee has a 330kV transmission line running from Western Power's Three Springs Terminal to Karara mine site. The Licensee purchases power in bulk from

Synergy and is metered by Western Power at the network's entry point at Three Springs. There are no meters operated by the Licensee.

Western Power wheels power through the second circuit on the Licensee's towers to Golden Grove. Western Power connect to this circuit at Three Springs and connects then to the Western Power Line (132kV) at Mungarda Road (Koolanooka Transfer Point). Western Power controls and meters this circuit. The Licensee has no control over this circuit other than sharing towers. The line was connected to the second circuit in March 2015.

The records and areas covered by the Licence were inspected and interviews were also held with key personnel at the Mid-West licence area and in the Perth Office.

1.5 PREVIOUS AUDIT NON-COMPLIANCES AND RECOMMENDATIONS

There are 2 issues from previous audit.

Table of Previous Non Compliances and Audit Recommendations

A. Resolved before end of previous audit period

Reference (no./year)	(Compliance rating/ Legislative Obligation/ details of the issue)	Auditors' Recommendation	Date Resolved	Further action required (Yes/No/Not Applicable) Details of further action required including current recommendation reference if applicable

B. Resolved during current Audit period

Reference (no./year)	(Compliance rating/ Legislative Obligation/ details of the issue)	Auditors' Recommendation	Date Resolved	Further action required (Yes/No/Not Applicable) Details of further action required including current recommendation reference if applicable

C. Unresolved at end of current Audit period

Reference (no./year)	(Compliance rating/ Legislative Obligation/ details of the issue)	Auditors' Recommendation	Date Resolved	Further action required (Yes/No/Not Applicable) Details of further action required including current recommendation reference if applicable
1/2013 105	Not Compliant 2 2010 Fes were late	Establish action and control processes to ensure regulatory compliance issues are carried out and on time.	Not	Yes -while there may have been date confusion this item is still not resolved.
2/2013 124	Not Compliant 2 2011, 2012 and 2013 reports were late	Establish action and control processes to ensure regulatory compliance issues are carried out and on time.	Not	Yes – A control process has been implemented but late so this item is still not resolved

Opportunities for Improvement (2013)

Table of Previous Non Compliances and Audit Recommendations				
A. Resolved before end of previous audit period				
Reference (no./year)	**(Compliance rating/ Legislative Obligation/ details of the issue)**	**Auditors' Recommendation**	**Date Resolved**	**Further action required (Yes/No/Not Applicable) Details of further action required including current recommendation reference if applicable**
4/2013 485	*Compliant 3* The line is monitored manually and by Western Power but the Licensee is not automatically monitoring Transmission line for outages	Commence monitoring and recording outages on Transmission line	2014	No – This is no longer a requirement as there are no customers
5/2013	*Compliant 3* Not Capturing historic SCADA data	Commence capture of historic data from SCADA on Transmission line	2014	No – This is no longer a requirement as there are no customers
3/2013 106	*Compliant 3* The line is monitored manually and by Western Power but the Licensee is not automatically monitoring Transmission line for outages.	Commence monitoring and recording outages on Transmission line.	2014	No – This is no longer a requirement as there are no customers
B. Unresolved at end of current Audit period				
Reference (no./year)	**(Compliance rating/ Legislative Obligation/ details of the issue)**	**Auditors' Recommendation**	**Date Resolved**	**Further action required (Yes/No/Not Applicable) Details of further action required including current recommendation reference if applicable**

1.6 ISSUES FROM CURRENT AUDIT

There are 2 issues from current audit.

1.6.1 COMPLIANCE ELEMENTS REQUIRING CORRECTIVE MEASURES

The actions requiring corrective measures are:

Table of Current Audit Non-Compliances/Recommendations			
A. Resolved during current Audit period			
Reference (no./year)	**Non-Compliance/Controls improvement (Rating / Legislative Obligation / Details of Non Compliance or inadequacy of controls)**	**Date Resolved (& management action taken)**	**Auditors comments**

B. Unresolved at end of current Audit period			
Reference (no./year)	**Non-Compliance/Controls improvement (Rating / Legislative Obligation / Details of Non Compliance or inadequacy of controls)**	**Auditors' Recommendation**	**Management action taken by end of Audit period**
1/2016 105	B2 2015 Fes were late	Establish verification of control processes to ensure regulatory compliance issues are carried out and on time for accuracy and repeatability.	Process implemented but there may have been date confusion so this item is still not resolved.
1/2016 124	C2 2013 and 2015 reports were late	Establish verification of control processes to ensure regulatory compliance issues are carried out and on time for accuracy and repeatability.	Process implemented but late so this item is still not resolved.

1.6.2 OPPORTUNITIES FOR IMPROVEMENT

Table of Current Audit Non-Compliances/Recommendations			
Unresolved at end of current Audit period			
Reference (no./year)	**Non-Compliance/Controls improvement (Rating / Legislative Obligation / Details of Non Compliance or inadequacy of controls)**	**Auditors' Recommendation**	**Management action taken by end of Audit period**

1.7 PREVIOUS REVIEW RECOMMENDATIONS

Recommendations from last review (2013):

Previous review ineffective components recommendations

Table of Previous Review Ineffective Components Recommendations				
A. Resolved before end of previous review period				
Reference (no./year)	**(Asset management effectiveness rating/ Asset Management System Component & Criteria / details of the issue)**	**Auditors' Recommendation or action taken**	**Date Resolved**	**Further action required (Yes/No/Not Applicable) & Details of further action required including current recommendation reference if**

	applicable

B. Resolved during current Review period				
Reference (no./year)	**(Asset management effectiveness rating/ Asset Management System Component & Criteria / details of the issue)**	**Auditors' Recommendation**	**Date Resolved**	**Further action required (Yes/No/Not Applicable) & Details of further action required including current recommendation reference if applicable**
1/2013 2.0	*A2* Asset creation/ acquisition Improve HR standards by having requirements to comply with statutory obligations	Add an overt requirement to comply with statutory obligations to HR standards	2014	No compliance with statutory requirements included in induction process.
2/2013 3.1	*BNR* Asset disposal Asset disposal process incomplete.	Develop an asset disposal process	2013	No – Incorporated in Lease contracts and environmental make good obligations.
3/2013 5.6	B2 Asset operations Not monitoring for outages	Commence monitoring for outages	2013	No – This is no longer a requirement as there are no customers

C. Unresolved at end of current Review period			
Reference (no./year)	**(Asset management effectiveness rating/ Asset Management System Component & Criteria / details of the issue)**	**Auditors' Recommendation**	**Further action required (Yes/No/Not Applicable) & Details of further action required**
4/2013 9.1	C3 Contingency planning Contingency Plans not yet developed	Develop Contingency plans based on risk assessment and subsequently schedule testing of the contingency plans.	Yes - contingency plans developed but not yet tested
5/2013 12.2	ANR Review of AMS Schedule review of AMS	The Asset Management System requires a scheduled formal review every 5 years	Yes - 5-year cycle has not yet arrived. 2-year internal reviews to be implemented

1.8 TABLE OF CURRENT REVIEW ASSET SYSTEM DEFICIENCIES/ RECOMMENDATIONS

Table of Current Review Asset System Deficiencies/Recommendations			
A. Resolved during current Review period			
Reference (no./year)	**Asset System Deficiency (Rating/ Asset Management System Component & Effectiveness Criteria / Details of Asset System Deficiency)**	**Date Resolved (& management action taken)**	**Auditors comments**
B. Unresolved at end of current Review period			

Reference (no./year)	Asset System Deficiency (Rating/ Asset Management System Component & Effectiveness Criteria / Details of Asset System Deficiency)	Auditors Recommendation	Management action taken by end of audit period
1/2016 1.8	B1 Asset Planning Review of Asset Management System	Schedule internal reviews in 2 years and formal review every 5 years for the Asset Management System.	Yes - not yet implemented
2/2016 9.1	B2 Contingency planning Contingency Plans not yet developed and tested	Contingency plans developed after review period but not yet tested.	Yes -schedule tests of contingency plan
3/2016 12.1/12.2	B2 Review of AMS Schedule review of AMS	Schedule internal reviews every 2 years, starting in 2018, and formal review every 5 years, beginning in 2017, for the Asset Management System.	Yes - not yet implemented

2 PERFORMANCE AUDIT & ASSET MANAGEMENT SYSTEM REVIEW PERFORMANCE AUDIT OBJECTIVES

2.1 PERFORMANCE AUDIT OBJECTIVES

Under section 13 of the *Electricity Industry Act 2004* (the Act), it is a requirement that every licensee provide the Economic Regulation Authority (ERA) not less than once in every period of 2 years or longer as the ERA allows with a performance audit conducted by an independent expert acceptable to the ERA.

The primary objective of the audit is to audit the effectiveness of measures taken by the Licensee to maintain quality and performance standards. The Act states a performance audit is an audit of the effectiveness of measures taken by the Licensee to meet the performance criteria specified in the licence. The licence states that performance standards are contained in applicable legislation. Performance criteria are defined in the licence as*:*

(a) the terms and conditions of the *licence*; and

(b) any other relevant matter in connection with the applicable legislation that the ERA determines should form part of the audit.

The licence also provides for individual licence conditions namely - the *ERA* may prescribe individual performance standards in relation to the Licensee of its obligations under this licence or the applicable legislation (the Act and subordinate legislation).

The audit and review are to be conducted in accordance with the prevailing ERA documents “Audit Guidelines: Electricity Gas and Water Licence (hereinafter “Guidelines”)[1] and the Electricity Compliance Reporting Manual (hereinafter “Manual”)[2]. In particular, the Manual identifies each licence condition and resolves it into a number of obligations (hereinafter “Obligations”), each of which is to be addressed individually by the audit.

The Licensee appointed McGill Engineering Services Pty Ltd to conduct the audit of its Transmission Licence with approval from the ERA. A preliminary assessment was conducted with the Licensee’s management to determine the inherent risk and the state of control for each compliance element of the Licence obligation. McGill Engineering Services Pty Ltd then prioritised the audit coverage based on the risk profile of the Licensee with an emphasis on providing greater focus and depth of testing for areas of higher risk to provide reasonable assurance that the Licensee had complied with the standards, outputs and outcomes under the Licence obligations.

[1] Economic Regulation Authority: Audit and Review Guidelines: Electricity and Gas Licences April 2014

[2] Economic Regulation Authority: Electricity Compliance Reporting Manual May 2014. The audit period was covered by the 2013 manual for a period and the 2014 manual for the majority of the audit period. The are no items in the 2013 manual that are not in the 2014 manual and the 2014 manual is used for the audit. The 2016 manual was issued outside the audit period.

The audit was conducted in a manner consistent with Australian Auditing Standards (AUS) 808 “Planning Performance Audits” and AUS 806 “Performance Auditing”. McGill Engineering Services Pty Ltd evaluated the adequacy and effectiveness of the controls and performance by the Licensee relative to the standards referred in the Transmission Licence through a combination of enquiries, examination of documents and detailed testing for Transmission Licence ETL 6 for the Licensee.

2.2 REVIEW OBJECTIVES

Under the *Electricity Industry Act 2004* (the Act) section 14, the holder of a Transmission License must develop an Asset Management Plan and maintain an asset management system to manage the assets accordingly for delivery of a reliable service to its customers. The Act requires a review of the asset management system every two years (or other time approved by the ERA*).*

This report is an impartial review of the Licensee’s asset management effectiveness under the Review Guidelines: Electricity, Gas and Water Licences published by the ERA.

The review conducted between July and September 2016 examined the asset management processes used by the Licensee in delivering the services to its customers. These services include lifecycle processes for:

- Asset planning;
- Asset creation/acquisition;
- Asset disposal;
- Environmental analysis;
- Asset operations;
- Asset maintenance;
- Asset management information system (AMIS);
- Risk management;
- Contingency planning;
- Financial planning;
- Capital expenditure planning; and
- Review of the asset management system.

As well as the processes, the asset management supporting systems were tested as to their use and effectiveness. Data used by the Licensee was also examined with respect to its effectiveness for asset management and the delivery of outcomes.

Tests were undertaken through interviews and investigation of the processes to assess whether they were being performed as documented.

The Licensee appointed McGill Engineering Services Pty Ltd to conduct the review of its Transmission Licence with approval from the ERA. A preliminary assessment was conducted with the Licensee’s management to determine the inherent risk and the state of control for each compliance element of the Licence obligation. McGill Engineering Services Pty Ltd then prioritised the review coverage based on the risk profile of the

Licensee with an emphasis on providing greater focus and depth of testing for areas of higher risk to provide reasonable assurance that the Licensee had complied with the standards, outputs and outcomes under the Licence obligations.

The review was conducted in a manner consistent with ASAE 3000 Assurance standard for engagements to audit other than historical financial information. McGill Engineering Services Pty Ltd evaluated the adequacy and effectiveness of the controls and performance by the Licensee relative to the standards referred in the Transmission Licence through a combination of enquiries, examination of documents and detailed testing for Electricity Transmission Licence ETL 6 for Karara Power Pty Ltd.

2.3 SCOPE LIMITATION

The review was undertaken by examination of documents, interviews with key persons and observations and is not a detailed inspection of physical items.

2.4 INHERENT LIMITATIONS

Because of the inherent limitations of any internal control structure, it is possible that fraud, error or non-compliance with laws and regulations may occur and not be detected.

An audit is not designed to detect all weaknesses in compliance measures as an audit is not performed continuously throughout the period and the audit procedures performed on the compliance measures are undertaken on a test basis.

Any projection of the evaluation of the operating licences to future periods is subject to the risk that the compliance measures in the plans may become inadequate because of changes in conditions or circumstances, or that the degree of compliance with them may deteriorate.

The audit opinion expressed in this report has been formed on the above basis.

2.5 STATEMENT OF INDEPENDENCE

To the best of my knowledge and belief, there is no basis for contraventions of any professional code of conduct in respect of the audit.

I have not done or contemplate undertaking any other work with the Licensee.

There are no independence threats due to:

- self-interest – as the audit company or a member of the audit team have no financial or non-financial interests in the Licensee or a related entity;
- self-review – no circumstance has occurred:
    - where the audit company or a member of the audit team has undertaken other non-audit work for the Licensee that is being evaluated in relation to the audit/review; or
    - when a member of the audit team was previously an officer or director of the Licensee; or

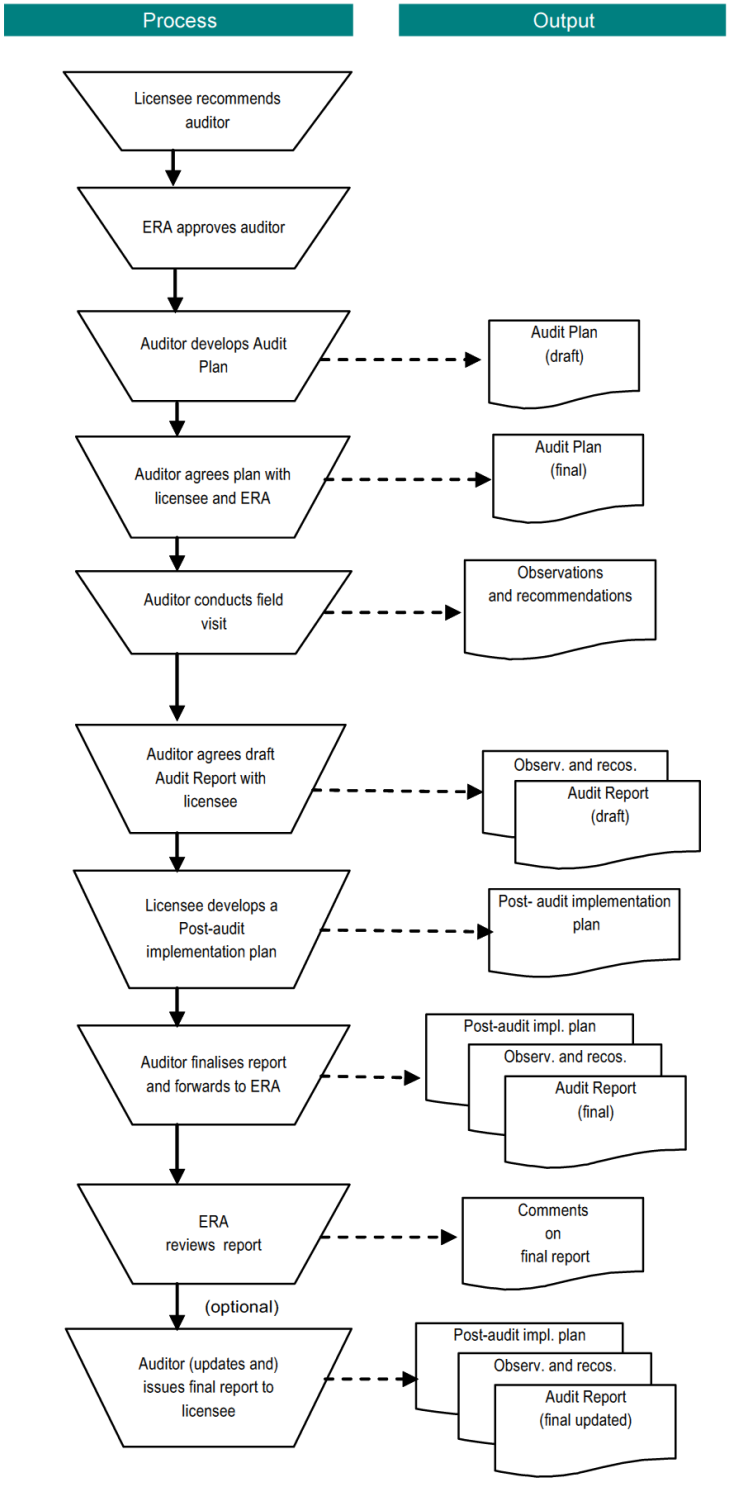
- where a member of the audit team was previously an employee of the Licensee who was in a position to exert direct influence over material that will be subject to audit during an audit/review.

There is no risk of a self-review threat as:

- no work has been undertaken by the auditor, or a member of the audit/review team, for the Licensee within the previous 24 months; or
- the auditor is currently undertaking for the Licensee; or
- the auditor has submitted an offer, or intends to submit an offer, to undertake for the Licensee within the next 6 months; and
- there is no close family relationship with a Licensee, its directors, officers or employees, and
- the auditor is not, nor is perceived to be too sympathetic to the Licensee's interests.

2.6 SCOPE OF THE AUDIT

The audit was conducted in accordance with flow chart:



2.7 KEY CONTACTS

The key contacts were:

- Licensee: The licensee's key people are
  - Jarod Turnbull: Maintenance Planning Superintendent Karara Mining Pty Ltd

- Pieter Bezuidenhout; Superintendent Electrical Maintenance …Karara Mining Pty Ltd
- William Madzikanda: Senior High Voltage Engineer Karara Mining Pty Ltd
- Rhys Houlihan: Manager – Environment & Communities Karara Mining Pty Ltd
- Samuel Main: Commercial Analyst Karara Mining Pty Ltd

- McGill Engineering Services Pty Ltd:
  - Kevan McGill.

The line site and terminal station at Karara was visited and the Perth Office.

2.7.1 EXCLUDED CONDITIONS

The 2nd circuit on the Licensee's towers are used by Western Power to wheel power to Golden Grove from Three Springs to Mungarda Road (tower KT140 – Koolanooka Transfer Point). Western Power controls the line with their circuit breakers and meter the line in their substation. The Licensee has no part or control over the matter other than the use of a circuit on their towers by Western Power.

The line from Eneabba to Three Springs (about 98km) was transferred to Western Power during the audit period (2013). This reduced the licensed assets to 78 Km from 176 Km. Western Power operated and maintained this segment both before and after the transfer. The Licensee had no control over this segment at any time.

The licensee has an ETAC with Western Power and therefore has obligations under the Metering Code but no meters on its network, so items relevant to meters, metering installation and customers are deleted as not applicable. Western Power meters the incoming supply to the transmission line and accordingly the metering code requirements as users are applicable. In this extent the licensee has the characteristics of a load and loads do not have regulatory requirements for metering. Items 345, 360, 392-394, 409, 437-438, 456, 472, 475-482 have been included. Items 398-399 could not be included as they prescribe Retailers / Generators but not Transmitters.

The Licensee has no customers and no small use customers and the Network Quality and Reliability Code relates to quality and reliability of supply to customers and there are none. The other requirements in the Code relate to information on the quality or reliability and also do not apply. So, all items from the Network Quality and Reliability Code have been deleted.

2.8 AUDIT REQUIREMENTS

Compliance with licence conditions was examined according to the likely inherent risk and the adequacy of controls to manage that risk.

Nature of audit work conducted
The audit considered:

- **process compliance** - the effectiveness of systems and procedures in place throughout the audit period, including the adequacy of internal controls;

- **outcome compliance** – the actual performance against standards prescribed in the licence throughout the audit period;
- **output compliance** – the existence of the output from systems and procedures throughout the audit period (that is, proper records exist to provide assurance that procedures are being consistently followed and controls are being maintained);

and audit

- **integrity of reporting** – the completeness and accuracy of the compliance and performance reports provided to the ERA; and
- **compliance with any individual licence conditions** - the requirements imposed on the specific licensee by the ERA or specific issues that are advised by the ERA.

Stage	Auditor	Standard
1. Risk & Materiality Assessment Outcome - Operational/ Performance Audit Plan	K McGill	ASA 300 Planning ASA 315: Risk Assessments and Internal Controls ASAE 3000 Assurance standard for engagements to audit other than historical financial information AS/NZS 4360:2004: Risk Management ERA Guidelines
2. System Analysis	K McGill	AUS 810: Special Purpose Reports on Effectiveness of Control Procedures
3. Fieldwork Assessment and testing of; • The control environment • Information system • Compliance procedures • Compliance attitude	K McGill	AUS 502: Audit Evidence ASAE 3000 Assurance standard for engagements to audit other than historical financial information
4. Reporting	K McGill	ASA 300 Planning ASAE 3000 Assurance standard for engagements to audit other than historical financial information

2.9 OVERALL CONCLUSION

In my opinion, the Licensee maintained, in all material aspects, effective control procedures in relation to the Transmission ETL 6 licence for the audit period based on the relevant clauses referred to within the scope section of this report.

There are 2 non-compliances that required corrective actions.

2.10 FINDINGS

The conclusions of each of the elements of the licence are summarised in the following table. The audit risk as determined for each licence condition is also shown. The details of the audit can be seen in detailed findings on Page 26.

2.11 AUDIT COMPLIANCE AND CONTROLS RATING SCALES

Performance audit compliance and controls rating scales			
Adequacy of Controls Rating		**Compliance Rating**	
Rating	**Description**	**Rating**	**Description**
A	Adequate controls - no improvement needed	1	Compliant
B	Generally adequate controls – improvement needed	2	Non-compliant – minor impact on customers or third parties
C	Inadequate controls -significant improvement required	3	Non-compliant – moderate impact on customers or third parties
D	No controls evident	4	Non-compliant – major impact on customers or third parties
NP	Not performed	NR	Not Rated

2.12 AUDIT SUMMARY

Item	Licence Clause/Condition reference (Cl.=clause, Sch.=schedule)	Obligations under condition	Licence Type (T = Transmission)	Type	Audit Priority	**Adequacy of Controls** (NP=Not Performed)	**Compliance Rating** (NR = Not Rated)

Licence Conditions - Electricity Industry (Licence Conditions) Regulation Obligations - Electricity Industry Customer Transfer Code Clause					Priority	Adequacy of controls rating					Compliance Rating				
						A	B	C	D	NP	1	2	3	4	NR
1.	5.1	2.2(1)(a)	T	NR	5					✓					✓
Licence Conditions – Licence Clause – Transmission Obligations- Electricity Industry Act Section					**Priority**	**Adequacy of controls rating**					**Compliance Rating**				
						A	B	C	D	NP	1	2	3	4	NR
101.	14.1	s[3]13(1)	T	NR	5	✓					✓				
102.	20.1	s14(1)(a)	T	NR	5	✓					✓				
103.	20.2 &20.3	s14(1)(b)	T	2	4	✓					✓				
104.	20.4	s14(1)(c)	T	NR	5	✓					✓				
105.	4.1	s17(1)	T	2	4		✓					✓			
106	5.1	s31(3)	T	NR	5	✓					✓				
107.	5.1	s41(6)	T	2	4					✓					✓
112.	5.1	s115(1)	T	2	4	✓					✓				
113.	5.1	s115(2)	T	2	4	✓					✓				

Licence Conditions – Electricity Industry Act Section Obligations- Licence Clause – Transmission					Priority	Adequacy of controls rating					Compliance Rating				
						A	B	C	D	NP	1	2	3	4	NR
119.	s11	12.1	T	2	4	✓					✓				
120.	s11	13.4	T	2	4					✓					✓
121.	s11	14.2	T	2	4	✓					✓				
122.	S22	20.5	T	2	4	✓					✓				
123.	s11	15.1	T	2	4					✓					✓
124.	s11	16.1	T	2	4			✓				✓			
125.	s11	17.1&17.2	T	2	4					✓					✓
126.	s11	18.1	T	2	4	✓					✓				

Licence Conditions – Licence clause Obligations- Electricity Industry Metering	Priority	Adequacy of controls rating	Compliance Rating

[3] s = Section of Act

Code	Clause					A	B	C	D	NP	1	2	3	4	NR
345.	5.1	3.3B	T	NR	5					✓					✓
360.	5.1	3.11(3)	T	NR	5					✓					✓
392.	5.1.	4.4(1)	T	2	4					✓					✓
393.	5.1	4.5(1)	T	2	4					✓					✓
394.	5.1	4.5(2)	T	2	4					✓					✓
409.	5.1	5.4(2)	T	2	4					✓					✓
437.	5.1	5.21(5)	T	2	4					✓					✓
438.	5.1	5.21(6)	T	NR	4					✓					✓
456.	5.1	5.27	T	2	4					✓					✓
472.	5.1	7.2(1)	T	2	4					✓					✓
474.	5.1	7.2(4)	T	2	4					✓					✓
475.	5.1	7.2(5)	T	2	4					✓					✓
476.	5.1	7.5	T	NR	5					✓					✓
477.	5.1	7.6(1)	T	NR	5					✓					✓
478.	5.1	8.1(1)	T	NR	5					✓					✓
479.	5.1	8.1(2)	T	2	4					✓					✓
480.	5.1	8.1(3)	T	NR	5					✓					✓
481.	5.1	8.1(4)	T	NR	5					✓					✓
482.	5.1	8.3(2)	T	NR	5					✓					✓

2.13 REVIEW EFFECTIVENESS

2.13.1 ASSET MANAGEMENT REVIEW EFFECTIVENESS SUMMARY

The overall effectiveness rating for each asset management process is based on the combination of the process and policy adequacy rating and the performance rating.

Asset management process and policy definition adequacy rating

Rating	Description	Criteria
A	Adequately defined	• Processes and policies are documented. • Processes and policies adequately document the required performance of the assets. • Processes and policies are subject to regular reviews, and updated where necessary. • The asset management information system(s) are adequate in relation to the assets that are being managed.
B	Requires some improvement	• Process and policy documentation requires improvement. • Processes and policies do not adequately document the required performance of the assets. • Reviews of processes and policies are not conducted regularly enough. • The asset management information system(s) require minor improvements (taking into consideration the assets that are being managed).
C	Requires significant improvement	• Process and policy documentation is incomplete or requires significant improvement. • Processes and policies do not document the required performance of the assets. • Processes and policies are significantly out of date. • The asset management information system(s) require significant improvements (taking into consideration the assets that are being managed).

D	Inadequate	• Processes and policies are not documented. • The asset management information system(s) is not fit for purpose (taking into consideration the assets that are being managed).

Asset management performance ratings

Rating	Description	Criteria
1	Performing effectively	• The performance of the process meets or exceeds the required levels of performance. • Process effectiveness is regularly assessed, and corrective action taken where necessary.
2	Opportunity for improvement	• The performance of the process requires some improvement to meet the required level. • Process effectiveness reviews are not performed regularly enough. • Process improvement opportunities are not actioned.
3	Corrective action required	• The performance of the process requires significant improvement to meet the required level. • Process effectiveness reviews are performed irregularly, or not at all. • Process improvement opportunities are not actioned.
4	Serious action required	• Process is not performed, or the performance is so poor that the process is considered to be ineffective.

2.13.2 ASSET MANAGEMENT SYSTEM EFFECTIVENESS SUMMARY

ASSET MANAGEMENT SYSTEM COMPONENT & EFFECTIVENESS CRITERIA		Asset management process and policy definition adequacy rating	Asset management performance rating
1	Asset planning	**B**	**1**
11	Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning	A	1
1.2	Service levels are defined	A	1
1.3	Non-asset options (e.g. demand management) are considered	A	1
1.4	Lifecycle costs of owning and operating assets are assessed	A	1
1.5	Funding options are evaluated	A	1
1.6	Costs are justified and cost drivers identified	A	1
1.7	Likelihood and consequences of asset failure are predicted	A	1
1.8	Plans are regularly reviewed and updated	B	1
2.	Asset creation and acquisition	**A**	**NR**
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions	A	NR
2.2	Evaluations include all life-cycle costs	A	NR
2.3	Projects reflect sound engineering and business decisions	A	NR
2.4	Commissioning tests are documented and completed	A	NR
2.5	Ongoing legal/environmental/safety obligations of the asset owner are assigned and understood	A	NR
3.	Asset disposal	**A**	**NR**
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process	A	NR
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal	A	NR

	undertaken		
3.3	Disposal alternatives are evaluated	A	NR
3.4	There is a replacement strategy for assets	A	NR
4.	**Environmental analysis**	**A**	**1**
4.1	Opportunities and threats in the system environment are assessed	A	1
4.2	Performance standards (availability of service, capacity continuity, emergency response, etc.) are measured and achieved	A	1
4.3	Compliance with statutory and regulatory requirements	A	1
4.4	Achievement of customer service levels	A	1
5	**Asset operations**	**A**	**1**
5.1	Operational policies and procedures are documented and linked to service levels required	A	1
5.2	Risk management is applied to prioritise operations tasks	A	1
5.3	Assets are documented in an Asset Register including asset type, location, material, plans of components, an assessment of assets' physical/structural condition and accounting data	A	!
5.4	Operational costs are measured and monitored	A	!
5.5	Staff resources are adequate and staff receive training commensurate with their responsibilities	A	!
6	**Asset maintenance**	**A**	**1**
6.1	Maintenance policies and procedures are documented and linked to service levels required	A	1
6.2	Regular inspections are undertaken of asset performance and condition	A	1
6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule	A	1
6.4	Failures are analysed and operational/maintenance plans adjusted where necessary	A	1
6.5	Risk management is applied to prioritise maintenance tasks	A	1
6.6	Maintenance costs are measured and monitored	A	1
7	**Asset Management Information System (MIS)**	**A**	**1**
7.1	Adequate system documentation for users and IT operators	A	1
7.2	Input controls include appropriate verification and validation of data entered into the system	A	1
7.3	Logical security access controls appear adequate, such as passwords	A	1
7.4	Physical security access controls appear adequate	A	1
7.5	Data backup procedures appear adequate and backups are tested	A	1
7.6	Key computations related to Licensee performance reporting are materially accurate	A	1
7.7	Management reports appear adequate for the Licensee to monitor licence obligations	A	1
8	**Risk management**	**A**	**1**
8.1	Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system	A	1
8.2	Risks are documented in a risk register and treatment plans are actioned and monitored	A	1
8.3	The probability and consequences of asset failure are regularly assessed	A	1
9	**Contingency planning**	**B**	**2**
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks	B	2
10	**Financial planning**	**A**	**1**
10.1	The financial plan states the financial objectives and	A	1

	strategies and actions to achieve the objectives		
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs	A	1
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	A	1
10-.4	The financial plan provides firm predictions on income for the next five years and reasonable indicative predictions beyond this period	A	1
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	A	1
10.6	Significant variances in actual/budget income and expenses are identified and corrective action taken where necessary	A	1
11	Capital expenditure planning	**A**	**1**
11.1	There is a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates	A	1
11.2	The plan provides reasons for capital expenditure and timing of expenditure	A	1
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	A	1
11.4	There is an adequate process to ensure that the capital expenditure plan is regularly updated and actioned	A	1
12	Review of AMS	**B**	**2**
12.1	A review process is in place to ensure that the asset management plan and the asset management system described therein are kept current	**B**	**2**
2.2	Independent reviews (e.g. internal audit) are performed of the asset management system	**B**	**2**

2.14 ESTABLISHING THE CONTEXT

The key legislation that governs the licensing of providers of Electricity is the Electricity Industry Act 2004. In turn, the compliance elements in the organization's Operating Licence were examined and referred to throughout the audit process.

2.14.1 AUDIT RESULTS AND RECOMMENDATIONS

Summary of significant results

There are 2 non-compliances (items 105 and 124).

2.14.2 COMPLIANCE ELEMENTS REQUIRING CORRECTIVE MEASURES

There are 2 Issues requiring corrective action (items 105 and 124).

2.14.3 SUGGESTIONS FOR IMPROVEMENT

There are no suggestions for improvement.

2.15 DETAILED FINDINGS

The following sets out the audit findings

2.15.1 AUDIT WORK UNDERTAKEN

We conducted interviews and enquiries to:

- Understand the control environment by determining the responsibility matrix and key control points
- Obtain the policies and procedures for managing licensed areas; and
- Identify the information systems and processes employed to manage licensed areas
- Determine the level of understanding of the systems and processes for managing licensed areas
- In reviewing the procedures and protocols for managing provision of services within a licensed area, where applicable, we obtained flowcharts of the processes and assessed the reasonableness of the decision matrix and the adequacy of the control points implemented by the Licensee.

2.15.2 FURTHER CONTROL STRATEGIES

The Licensee has compliance manual to assist compliance with regulatory items and a risk register.

2.16POST AUDIT/ POST REVIEW IMPLEMENTATION PLANS

The Licensee will provide to the ERA a post-audit and post-review implementation plan, with the audit or review report.

2.17AUDIT/ REVIEW EVIDENCE

The following was considered in the audit.

- Transmission Licence V5
- Contact details
- Asset Register
- Environmental Plans and Approvals
- Spares List
- Commissioning Plans
- Karara Mining Financial reports
- Annual compliance returns
- Licence fees payment details

- Reticulation plans
- Asset management plan
- Risk management policy
- Project management manual
- As constructed details
- Lease payment details
- Sample lease contract
- HR standards
- Sample emergency training schedule
- Asset Management Plan
- Power outages spreadsheet.
- Contingency plan
- Western Power Wheeling Agreement
- Western Power Access Agreement
- Notice of sale of Eneabba to Three Springs HV Line
- Sample tender documents
- Karara Mining Corporate Standards
- Karara Power quality standards
- Energy budget
- Induction process
- HV training certificates

2.18 DETAILED AUDIT FINDINGS

The following sets out the audit findings

2.18.1 ELECTRICITY INDUSTRY ACT – ELECTRICITY INDUSTRY CUSTOMER TRANSFER CODE

Item 1 Transmission Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated
Licence: *Transmission*		
Electricity Industry (Licence Conditions) Regulation, regulation 5(2) *Electricity Industry Customer Transfer Code Clause 2.2(1)(a)* A network operator must treat all retailers which are its associates on an arms-length basis.		
Observations		

Documents	☐	Compliance	☐						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: N/a									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
There are no retailers which are associates of the Licensee.									
Issues									
None									
Recommendations									
None									

2.18.2 ELECTRICITY INDUSTRY ACT – LICENCE CONDITIONS AND OBLIGATIONS

Item 101 Transmission Licence condition 14.1	Adequacy of controls rating A	Compliance rating 1
Licence: *Transmission*		
Electricity Industry Act section 13(1) A Licensee must, not less than once every 24 months, provide the ERA with a performance audit conducted by an independent expert acceptable to the ERA.		
Observations		

Documents	☑	Compliance	☑						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: The Licensee contracted with the auditor to carry out the audit. The documents were forwarded to the ERA as part of the approval of the auditor. Licensee received approval from the ERA for audit scope and appointment of auditor.									
Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑
The Licensee contracted with the auditor to carry out the audit to meet the requirements. The last audit met the requirements.									
Issues									
None									
Recommendations									
None									

Item 102 Transmission Licence condition 20.1	Adequacy of controls rating A	Compliance rating 1

Licence: *Transmission*

Electricity Industry Act section 13(1)
A Licensee must provide for an asset management system.

Observations

Documents	☑	Compliance	☑						

Evidence: interviewed Senior HV Engineer, listed staff. Documents: Include, Asset Management Plan, Risk management policy, Project Execution Plan, Ellipse Screen shots, Asset Register, Environmental management plans Energy budget Commissioning Plans, Environmental Plans and Approvals, Spares List, Karara Mining Financial reports, Annual compliance returns, Licence fees payment details, Reticulation plans, Asset management plan, Project management manual.

Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑

The Licensee has an asset management system. A copy of the asset management plan was obtained, and maintenance systems reviewed at site. These included maintenance planning modules in Ellipse supported by spreadsheets. The asset management system includes time based and conditioned based maintenance. The review examined the efficacy of the asset management system.

Issues

None

Recommendations

None

Item 103 Transmission Licence condition 20.2 & 20.3	Adequacy of controls rating A	Compliance rating 1

Licence: *Transmission*

Electricity Industry Act section 13(1)
A Licensee must notify details of the asset management system and any substantial changes to it to the ERA.

Observations

Documents	☑	Compliance	☑						

Evidence: interviewed Senior HV Engineer, listed staff. Documents: Include letter to ERA about AMP. The asset management system was examined in the audit and review.

Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑

In the licence application the asset management system was advised to the ERA. There have been no substantial changes that required notifying the ERA.

Issues

None

Recommendations

None

Item 104 Transmission Licence condition 20.4	Adequacy of controls rating A	Compliance rating 1

Licence: *Transmission*

Electricity Industry Act section 14(1)(c)
A Licensee must provide the ERA with a report by an independent expert as to the effectiveness of its asset management system every 24 months, or such longer period as

determined by the ERA.									
Observations									
Documents	☑	Compliance	☑						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Include, Asset Management Plan. Approval and Appointment letters for current review.									
Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑
The Licensee contracted McGill Engineering Services, with approval of the ERA, for the review in accordance with the requirements and the review plan documents have been forwarded to the ERA as part of approval of the auditor.									
Issues									
None									
Recommendations									
None									

Item 105 Transmission Licence condition 4.1	Adequacy of controls rating B	Compliance rating 2
Licence: *Transmission*		
Electricity Industry Act section 17(1) A Licensee must pay to the ERA the prescribed licence fee within one month after the day of grant or renewal of the licence and within one month after each anniversary of that day during the term of the licence.		
Observations		

Documents	☑	Compliance	☒						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Include invoices and receipts									
Process	☒	Outcome	☒	Output	☒	Reporting	☒	Compliance	☒
The 2015 fee was paid late. The ERA invoice gave the date as 12/10/2015. This appears to be date format error where 12/10/2015 appears to be taken as 10 Dec 2015 and paid on 11 Dec 2015. The 2013 and 2014 fees were paid before the anniversary date.									
Issues									
Fees were late.									
Recommendations									
Establish verification of control processes to ensure regulatory compliance issues are carried out and on time for accuracy and repeatability.									

Item 106 Transmission Licence condition 5.1	Adequacy of controls rating A	Compliance rating 1
Licence: *Transmission*		
Electricity Industry Act section 31(3) A Licensee must take reasonable steps to minimise the extent or duration of any interruption, suspension or restriction of the supply of electricity due to an accident, emergency, potential danger or other unavoidable cause.		
Observations		

Documents	☑	Compliance	☑						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Include incident log.									
Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑
There have been 15 interruptions one being protracted at 50 hours. The outages were all Related to the Western Power supply generally and bushfires and lightning on the Western Power network. There is a need for mine production to keep interruptions to a minimum. All interruptions were minimized.									

Issues
The line is monitored manually and by Western Power.
Recommendations
None.

Item 107 Transmission Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Act section 41(6)
A Licensee must pay the costs of taking an interest in land or an easement over land.

Observations

Documents	☐	Compliance	☐						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Not applicable									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

No land has been acquired under Part 9 of the Land Administration Act and therefore no costs and expenses for taking an interest in land or an easement over land

Issues
None
Recommendations
None

Item 112 Transmission Licence condition 5.1	Adequacy of controls rating A	Compliance rating 1

Licence: *Transmission*

Electricity Industry Act section 115(1)
In relation to network infrastructure facilities covered by the Code, the network service provider or an associate of the network service provider, must not hinder or prevent:

- access by any person to services under the Code;
- the making of access agreements or other agreement in respect of those facilities; or
- the access to which a person is entitled under an access agreement or a determination made by way of arbitration.

Observations

Documents	☑	Compliance	☑						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Not applicable									
Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑

There have been no actions to hinder or prevent access.

Issues
None
Recommendations
None

Item 113 Transmission Licence condition 5.1	Adequacy of controls rating A	Compliance rating 1

Licence: *Transmission*

Electricity Industry Act section 115(2)
A licensee that has, or is an associate of a person that has, access to services under an access

agreement must not engage in conduct that hinders or prohibits access.									
Observations									
Documents	☑	Compliance	☑						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Not applicable									
Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑
There have been no actions to hinder or prevent access.									
Issues									
None									
Recommendations									
None									

2.18.3 ELECTRICITY LICENCE – LICENCE CONDITIONS AND OBLIGATIONS

Item 119 Electricity Industry Act section 11				Adequacy of controls rating A			Compliance rating 1		
Licence: *Transmission*									
Transmission Licence condition 12.1 A Licensee and any related body corporate must maintain accounting records that comply with the Australian Accounting Standards Board Standards or equivalent International Accounting Standards.									
Observations									
Documents	☑	Compliance	☑						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: The Karara annual report declaration by the financial auditor has been sighted. The Karara financial accounts refer to compliance with the appropriate accounting standards.									
Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑
The Karara Mining annual reports show compliance with accounting standards.									
Issues									
None									
Recommendations									
None									

Item 120 Electricity Industry Act section 11				Adequacy of controls rating Not Performed			Compliance rating Not Rated		
Licence: *Transmission*									
Transmission Licence condition 13.4 A Licensee must comply with any individual performance standards prescribed by the ERA.									
Observations									
Documents	☐	Compliance	☐						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Not applicable.									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
There are no individual performance standards applied by the ERA to assess compliance.									
Issues									
None									
Recommendations									

None

Item 121 Electricity Industry Act section 11	Adequacy of controls rating A	Compliance rating 1

Licence: *Transmission*

Transmission Licence condition 14.2
A Licensee must comply, and require its auditor to comply, with the ERA's standard audit guidelines dealing with the performance audit.

Observations

Documents	☑	Compliance	☑						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: The audit plan was forwarded to the ERA, approval of the auditor obtained prior to appointment.									
Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑
The Licensee has contracted with the auditor to comply with the requirements.									

Issues

None

Recommendations

None

Item 122 Electricity Industry Act section 11	Adequacy of controls rating A	Compliance rating 1

Licence: *Transmission*

Transmission Licence condition 20.5
A Licensee must comply, and must require the Licensee's expert to comply, with the relevant aspects of the ERA's standard guidelines dealing with the asset management system review.

Observations

Documents	☑	Compliance	☑						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: The AMS review plan has been forwarded to the ERA approval of the reviewer obtained prior to appointment.									
Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑
The Licensee has contracted with the reviewer to comply with the requirements.									

Issues

None

Recommendations

None

Item 123 Electricity Industry Act section 11	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Transmission Licence condition 15.1
A Licensee must report to the ERA, in the manner prescribed, if a Licensee is under external administration or there is a significant change in the circumstances upon which the licence was granted which may affect a Licensee's ability to meet its obligations.

Observations

Documents	☐	Compliance	☐						
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Not applicable.									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

The Licensee is not under external administration so not able to assess compliance with advice requirements.
Issues
None
Recommendations
None

Item 124 Electricity Industry Act section 11	Adequacy of controls rating C	Compliance rating 2

Licence: *Transmission*

Transmission Licence condition 16.1
A Licensee must provide the ERA, in the manner prescribed, any information the ERA requires in connection with its functions under the Electricity Industry Act.

Observations

Documents	☒	Compliance	☒	

Evidence: interviewed Senior HV Engineer, listed staff. The Utilities Superintendent advised that there have been no requests for information from the ERA other than Performance Audit, AMS Review and Compliance Report. Documents:

Process	☒	Outcome	☒	Output	☒	Reporting	☒	Compliance	☒

The Licensee has not met the reporting manual requirements. The 2013, and 2015 reports were late. The 2016 report was also late but outside the audit period.

Issues

2013 and 2015 reports were late. This was raised in last audit. Action and control processes to ensure regulatory compliance issues are carried out and on time were implemented but late in the audit period.

Recommendations

Establish verification of control processes to ensure regulatory compliance issues are carried out and on time for accuracy and repeatability.

Item 125 Electricity Industry Act section 11	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Transmission Licence condition 17.1 & 17.2
A Licensee must publish any information it is directed by the ERA to publish, within the timeframes specified.

Observations

Documents	☐	Compliance	☐	

Evidence: interviewed Senior HV Engineer, listed staff. Documents: Not applicable.

Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

The ERA has not directed any information to be published so unable to assess compliance with publishing requirements.

Issues

None

Recommendations

None

Item 126 Electricity Industry Act section 11	Adequacy of controls rating	Compliance rating

	A	1

Licence: *Transmission*

Transmission Licence condition 18.1
Unless otherwise specified, all notices must be in writing.

Observations

Documents	☑	Compliance	☑	

Evidence: interviewed Senior HV Engineer, listed staff. Documents: Sample communication with ERA sighted.

Process	☑	Outcome	☑	Output	☑	Reporting	☑	Compliance	☑

No notices have been required by the ERA. All material communication with the ERA is in writing.

Issues

None

Recommendations

None

2.18.4 ELECTRICITY INDUSTRY METERING CODE – LICENCE CONDITIONS AND OBLIGATIONS (ALL LICENCE CONDITION LICENCE CLAUSE 5.1)

Item 345 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 3.3B
A user who is aware of bi-directional flows at a metering point which was not previously subject to a bi-directional electricity flows or any changes in a customer's or user's circumstances in a metering point which will result in bi-directional electricity flows must notify the network operator within 2 business days.

Observations

Documents	☐	Compliance	☐	

Evidence: interviewed Senior HV Engineer, listed staff, inspected transmission line. Documents: n/a

Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

The Licensee has no meters with all metering by Western Power. The Licensee has no capacity to provide power back to Western Power. While there is local generation, the circuit breakers are inter-tripped to de-energise the line when Western Power opens the breaker at the source (Three Springs).

Issues

None

Recommendations

None

Item 360 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 3.11(3)

A Code participant who becomes aware of an outage or malfunction of a metering installation must advise the network operator as soon as practicable.									
Observations									
Documents	☐	Compliance	☐						
Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a .									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
The Licensee has no meters with all metering by Western Power. The Licensee is not aware of any outage or malfunction to require advice.									
Issues									
None									
Recommendations									
None									

Item 392 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated
Licence: *Transmission*		
Electricity Industry Metering Code clause 4.4(1) If there is a discrepancy between energy data held in a metering installation and data held in the metering database, the affected Code participants and the network operator must liaise together to determine the most appropriate way to resolve a discrepancy..		
Observations		
Documents ☐ Compliance ☐		
Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a.		
Process ☐ Outcome ☐ Output ☐ Reporting ☐ Compliance ☐		
The Licensee has no meters with all metering by Western Power. The Licensee has no metering database and no metering installation to allow a discrepancy.		
Issues		
None		
Recommendations		
None		

Item 393 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated
Licence: *Transmission*		
Electricity Industry Metering Code clause 4.5(1) A Code participant must not knowingly permit the registry to be materially inaccurate..		
Observations		
Documents ☐ Compliance ☐		
Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a.		
Process ☐ Outcome ☐ Output ☐ Reporting ☐ Compliance ☐		
The Licensee has no meters with all metering by Western Power. The Licensee is no knowledge of Western Power's registry other than their own details.		
Issues		
None		
Recommendations		
None		

Item 394 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 4.5(2)
Subject to subclause 5.19(6), if a Code participant, other than a network operator, becomes aware of a change to, or an inaccuracy in, an item of standing data in the registry, then it must notify the network operator and provide details of the change or inaccuracy within the timeframes prescribed.

Observations

Documents	☐	Compliance	☐		

Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line.
Documents: n/a.

Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

The Licensee has no meters with all metering by Western Power. The Licensee has no customers to have any registry data, nor has there been any change to their own data.

Issues

None

Recommendations

None

Item 409 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 5.4(2)
A user must, when reasonably requested by a network operator, assist the network operator to comply with the network operator's obligation under subclause 5.4(1).

Observations

Documents	☐	Compliance	☐		

Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line.
Documents: n/a.

Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

The Licensee has no meters with all metering by Western Power. There have been no requests from Western Power.

Issues

None

Recommendations

None

Item 437 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 5.21(5)
A Code participant must not request a test or audit under subclause 5.21(1) unless the Code participant is a user and the test or audit relates to a time or times at which the user was the current user or the Code participant is the IMO.

Observations

Documents	☐	Compliance	☐		

Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line.

Documents: n/a.									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
The Licensee has no meters with all metering by Western Power. There have been no requests for tests or audits.									
Issues									
None									
Recommendations									
None									

Item 438 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated
Licence: *Transmission*		
Electricity Industry Metering Code clause 5.21(6) A Code participant must not make a request under subclause 5.21(1) that is inconsistent with any access arrangement or agreement.		
Observations		
Documents ☐ Compliance ☐		
Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a.		
Process ☐ Outcome ☐ Output ☐ Reporting ☐ Compliance ☐		
The Licensee has no meters with all metering by Western Power. There have been no requests for tests or audits.		
Issues		
None		
Recommendations		
None		

Item 456 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated
Licence: *Transmission*		
Electricity Industry Metering Code clause 5.27 Upon request from a network operator, the current user for a connection point must provide the network operator with customer attribute information that it reasonably believes are missing or incorrect within the timeframes prescribed.		
Observations		
Documents ☐ Compliance ☐		
Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a.		
Process ☐ Outcome ☐ Output ☐ Reporting ☐ Compliance ☐		
The Licensee has no meters with all metering by Western Power. There have been no requests.		
Issues		
None		
Recommendations		
None		

Item 472 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 7.2(1)
Code participants must use reasonable endeavours to ensure that they can send and receive a notice by post, facsimile and electronic communication and must notify the network operator of a telephone number for voice communication in connection with the Code.

Observations

Documents	☐	Compliance	☐	

Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line.
Documents: n/a.

Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

The Licensee has no meters with all metering by Western Power. Western Power has the contact details and the licensee's control room operates 24/7.

Issues

None

Recommendations

None

Item 474 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 7.2(4)
If requested by a network operator with whom it has entered into an access contract, the Code participant must notify its contact details to a network operator within 3 business days after the request.

Observations

Documents	☐	Compliance	☐	

Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line.
Documents: n/a.

Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

The Licensee has no meters with all metering by Western Power. There has been no request. Western Power has the contact details.

Issues

None

Recommendations

None

Item 475 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 7.2(5)
A Code participant must notify any affected network operator of any change to the contact details it notified to the network operator under subclause 7.2(4) at least 3 business days before the change takes effect.

Observations

Documents	☐	Compliance	☐	

Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line.
Documents: n/a.

Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
The Licensee has no meters with all metering by Western Power. There has been no change in the contact details.									
Issues									
None									
Recommendations									
None									

Item 476 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated
Licence: *Transmission*		
Electricity Industry Metering Code clause 7.5 A Code participant must subject to subclauses 5.17A and 7.6 not disclose, or permit the disclosure of, confidential information provided to it under or in connection with the Code and may only use or reproduce confidential information for the purpose for which it was disclosed or another purpose contemplated by the Code.		
Observations		

Documents	☐	Compliance	☐						
Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a.									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
The Licensee has no meters with all metering by Western Power. There has been no confidential information to disclose.									
Issues									
None									
Recommendations									
None									

Item 477 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated
Licence: *Transmission*		
Electricity Industry Metering Code clause 7.6(1) A Code participant must disclose or permit the disclosure of confidential information that is required to be disclosed by the Code.		
Observations		

Documents	☐	Compliance	☐						
Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a.									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
The Licensee has no meters with all metering by Western Power. There has been no confidential information to disclose.									
Issues									
None									
Recommendations									
None									

Item 478 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 8.1(1)
If any dispute arises between any Code participants then (subject to subclause 8.2(3)) representatives of disputing parties must meet within 5 business days after a notice given by a disputing party to the other disputing parties and attempt to resolve the dispute by negotiations in good faith.

Observations

Documents	☐	Compliance	☐	

Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line.
Documents: n/a.

Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

The Licensee has no meters with all metering by Western Power. There have been no disputes to resolve.

Issues

None

Recommendations

None

Item 479 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 8.1(2)
If a dispute is not resolved within 10 business days after the dispute is referred to representative negotiations, the disputing parties must refer the dispute to a senior management officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.

Observations

Documents	☐	Compliance	☐	

Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line.
Documents: n/a.

Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐

The Licensee has no meters with all metering by Western Power. There have been no disputes to resolve.

Issues

None

Recommendations

None

Item 480 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated

Licence: *Transmission*

Electricity Industry Metering Code clause 8.1(3)
If the dispute is not resolved within 10 business days after the dispute is referred to senior management negotiations, the disputing parties must refer the dispute to the senior executive officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.

Observations

Documents	☐	Compliance	☐	

Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a.									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
The Licensee has no meters with all metering by Western Power. There have been no disputes to resolve.									
Issues									
None									
Recommendations									
None									

Item 481 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated
Licence: *Transmission*		
Electricity Industry Metering Code clause 8.1(4) If the dispute is resolved by representative negotiations, senior management negotiations or CEO negotiations, the disputing parties must prepare a written and signed record of the resolution and adhere to the resolution.		
Observations		

Documents	☐	Compliance	☐						
Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a.									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
The Licensee has no meters with all metering by Western Power. There have been no disputes to resolve.									
Issues									
None									
Recommendations									
None									

Item 482 Licence condition 5.1	Adequacy of controls rating Not Performed	Compliance rating Not Rated
Licence: *Transmission*		
Electricity Industry Metering Code clause 8.3(2) The disputing parties must at all times conduct themselves in a manner which is directed towards achieving the objective in subclause 8.3(1).		
Observations		

Documents	☐	Compliance	☐						
Evidence: interviewed Senior HV Engineer, listed staff, inspected Transmission line. Documents: n/a.									
Process	☐	Outcome	☐	Output	☐	Reporting	☐	Compliance	☐
The Licensee has no meters with all metering by Western Power. There have been no disputes to resolve.									
Issues									
None									
Recommendations									
None									

2.19 ASSET MANAGEMENT SYSTEM REVIEW RESULTS AND RECOMMENDATIONS

Asset Planning	Process/Policy rating B	Effectiveness rating 1

1. Asset planning

Asset planning strategies are focused on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price).

Observations

Asset Planning Process/Plan and its currency

The Licensee has approximately 78 km of Transmission lines between Three Springs and Karara. The line from Eneabba to Three Springs (98 Km) was transferred to Western Power during the review period. The use of the second circuit on the Licensee's towers by Western Power for its customer also occurred in the audit period. (March 2015).

Asset management has to be part of the context of the licensed operations as part of the business of the company which is mining. The licensed facilities only exist to facilitate mining and are governed by the life of the mine. The life cycle of Transmission assets is usually much longer than the life of a mine. Asset planning will be subservient to mine planning. That is, there will be no planning for licensed assets that are not dependent on a mining development.

The Licensee has developed an asset management plan for the licensed assets. This plan was to be reviewed 5 yearly by Superintendent Electrical Maintenance and internally in 2014. The 5-year anniversary has not yet been reached but the scheduled internal reviews have not taken place.

The asset management plan consists of following parts:

- Purpose of the Asset Management Plan (AMP)
- Key Stakeholders
- Future Power Transmission Demand
- Risk Management
- Financials
- Disposal of Eneabba to Three Springs 330kV Transmission Line
- Land Access
- Supply Reliability
- Maintenance (Eneabba 132kV Substation to Three Springs Terminal)
- Maintenance (Three Springs Terminal to Karara's Mine)
- Corona and Thermal Imaging
- Photos and Drawings
- Annual Inspections
- Spares
- Emergency and Breakdown
- Evaluation of Asset Performance

Service strategies and service standards are set out in the plan.

Given the context of the licensed assets as part of much bigger assets, the plan is appropriate for the scale and nature of the operations.

Allocation of responsibilities / statutory obligations
The organisational arrangements allocate responsibilities. There is documentation requiring compliance with statutory obligations.

Evaluation Criteria summary

1.1 Asset management plan covers key requirements. **A1**
Response: AMP meets this criterion.

1.2 Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning.
Response: The AMP meets this criterion and reflects the needs of all stakeholders and is integrated with business planning.

1.3 Service levels are defined. **A1**
Response: The AMP defines service levels.

1.4 Non-asset options (eg demand management) are considered. **A1**
Response: The AMS is substantially about utilization of the current assets and no new proposals are likely outside mining development. Further asset options are unlikely and non-asset options such as better utilization of the current assets will be most likely for capacity increases. The current assets have scope for expansion.

1.5 Lifecycle costs of owning and operating assets are assessed. **A1**
Response: The AMP meets this criterion with lifecycle costs of owning and operating assets assessed as part of the existing mine infrastructure and any future mining proposals. Mine life, which is generally shorter than network asset life, is likely to be the determining factor of lifecycle costing. The capital cost will be considered and costed in mine project feasibility and not in terms of the electrical assets cost viability in its own right. Servicing the mines is the dominant requirement for the assets with mine profitability and metal prices being the major driving force.

1.6 Funding options are evaluated. **A1**
Response: Financial decisions are often taken on mining project feasibility rather than analysis of the expected life of the electrical assets. Funding is determined by what is necessary to serve mining functions and funding provided for expansion from mining project feasibility.

1.7 Costs are justified and cost drivers identified. **A1**
Response: Financial decisions are often taken on metal prices and mining project feasibility rather than analysis of the expected life of the electrical assets. Funding is determined by what is necessary to serve mining functions. Any proposal would include justification of costs and identification of cost drivers including availability and reliability of supply.

1.8 Likelihood and consequences of asset failure are predicted. **A1**
Response: The evaluation of risks addressed in the AMP cover the aspects of asset failure and consequences.

1.9 Plans are regularly reviewed and updated. **B1**
Response: The AMP meets this criterion as the responsibility of review of the AMS is assigned to the Superintendent Electrical Maintenance. Annual performance reviews that take place and would be the basis for the AMP review. It was proposed that it be reviewed internally in 2014 and 5 yearly formal reviews of

the AMP thereafter.						
Asset management process and policy definition						
Process	☑	Policy	☑	Documentation	☑	
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Transmission Licence, Asset Register, Environmental Plans and Approvals, Spares List, Commissioning Plans, Karara Mining energy budget, Reticulation plans, Asset management plan, Risk management policy, Risk register, Project management manual, As constructed details, Financial philosophy (Plan)						
Asset management performance						
Process	☐	Availability	☐	Use	☐	
Issues						
The asset management has to be in the context of the licensed operations as part of the business of the company, which is mining. The licensed facilities primarily exist to facilitate mining and are governed by the life of the mine. The life cycle of Transmission assets is usually much longer than the life of a mine. Asset planning will be subservient to mine planning, that is, there will be no planning for expansion of the licensed assets that are not dependent on a mining development. Given this context the plan is appropriate for the scale and nature of the business. The internal reviews of the AMP to be scheduled.						
Recommendation						
Schedule internal reviews of AMP.						

Asset Creation	Process/Policy rating A	Effectiveness rating Not Rated

2. Asset creation and acquisition

Asset creation/acquisition means the provision or improvement of an asset where the outlay can be expected to provide benefits beyond the year of outlay.

Observations

Policies and procedures for asset creation / sample creation activities

Procurement of major electricity plant is a very significant exercise taking considerable time. There are documented procedures for creation of fixed assets. There has been no creation in the review period.

Meeting statutory obligations

There are documents and policies requiring contractors to comply with statutory obligations. There are HR standards that deal with non-compliance and the induction process covers these obligations.

The asset creation processes are appropriate with extensive project approval processes and standard engineering specifications prepared. The Project execution plan requires compliance with Australian Standards and Codes and Government Acts and Regulations

Evaluation Criteria summary

2.1 Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions. **ANR**

Response: Asset creation is unlikely outside of mining development or expansion. In that circumstance, there will be comprehensive assessment of creation options and justified as part of the mining project. Non-asset creating solutions would need to be considered against existing capacity and the ability of mine expansion to operate within the capacity. Significant demand management is not likely to be acceptable or satisfy the mine where expansion is required. The most likely options are to utilize existing capacity of the current network or upgrading.

2.2 Evaluations include all life-cycle costs **ANR**

Response: Asset creation is unlikely outside of mining development or expansion where the capital cost is considered as part of the life cycle cost of the mine development. In that circumstance, there will be comprehensive assessment of life cycle costs. The life of the asset is much more likely to be determined by the life of the mine rather than the life of the Transmission asset.

2.3 Projects reflect sound engineering and business decisions **ANR**

Response: The Licensee has the resources in house and by contract to ensure sound engineering and business decisions. There will be no asset creation likely outside mining related development. Extensive use has been made of external consultants for detailed engineering design.

Karara has a comprehensive project approval process.

Karara has a comprehensive set of standard engineering specifications available for major components of the network.

2.4 Commissioning tests are documented and completed **ANR**

Response: The Licensee has the resources in house and by contract to ensure commissioning tests are documented and completed.

2.5 Ongoing legal/environmental/safety obligations of the asset owner are assigned and understood **ANR**

Response: The responsibilities of the AMS are assigned to the Utilities Superintendent

and understood. Legal, environmental and safety are key components of new project work within the organisation and are specifically required to be addressed in projects.						
Asset management process and policy definition						
Process	☑	Policy	☑	Documentation	☑	
Evidence: interviewed Senior HV Engineer, listed staff. Documents: Asset Register, Commissioning Plans, Reticulation plans, Asset management plan, Project management manual, as constructed details, Sample tender documents were sighted and seen to be comprehensive.						
Asset management performance						
Process	☑	Availability	☑	Use	☑	
Issues						
The procurement processes are appropriate.						
Recommendation						
None.						

Asset Disposal	Process/Policy rating A	Effectiveness rating Not Rated

3. Asset disposal

Effective asset disposal frameworks incorporate consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets. Alternatives are evaluated in cost-benefit terms.

Observations

Policies and procedures for asset disposal / sample disposal activities

There was no disposal action in the review period. Disposal processes are being developed. Removing the licensed plant is unlikely during the life of the customers' mines. The transfer of the Eneabba to Three Springs section may be seen as an asset disposal but is only a financial transaction and not because of life / condition of the asset. The Licensee has been paid for the line. The second circuit used by Western Power for its customer (Golden Grove) was connected on 31 March 2015.

Meeting statutory obligations

There are documents and policies requiring contractors to comply with statutory obligations. There are HR standards that deal with non-compliance and the induction process covers these obligations. This is addressed under Asset Creation.

Evaluation Criteria summary

3.1 Under-utilised and under-performing assets are identified as part of a regular systematic review process **ANR**

Response: The AMS meets this criterion. There is little likelihood of disposal of the system or portions thereof outside mining operation imperatives. There are make good requirements in land leases and in the Environmental approval.

3.2 The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken **ANR**

Response: The most likely issue is plant failures and these are critically examined. There is unlikely to be disposal of the asset but components will be disposed as they become unserviceable.

3.3 Disposal alternatives are evaluated **ANR**

Response: The AMS meets this criterion. There is little likelihood of disposal of the system or portions thereof outside mining operation imperatives.

3.4 There is a replacement strategy for assets **ANR**

Response: The AMS meets this criterion and allows for plant replacement. Replacement will be determined by expansion need or a finding from condition based maintenance. There are make good requirements in land leases and in the Environmental approval.

Asset management process and policy definition

Process	☑	Policy	☑	Documentation	☑	

Evidence: interviewed Senior HV Engineer, listed staff. Documents: Reticulation plans, Asset management plan, Project management manual

Asset management performance						
Process	☐	Availability	☐	Use	☐	
Issues						
None						
Recommendation						
None						

Environmental analysis	Process/Policy rating A	Effectiveness rating 1

4. Environmental analysis

Environmental analysis examines the asset system environment and assesses all external factors affecting the asset system.

Observations

Standards / monitoring / reporting / breaches

The Licensee has an Environmental Management Plan (EMP). Reporting and monitoring tools are appropriate.

The Licensee has a number of environmental licences and no unresolved issues have arisen with respect to environmental matters. No non-compliances have been reported.

The principal external threats to the assets relate to storms or bush fires to Transmission assets. Given the close relationship to the mines there are little threats of external competition to the assets. The capability to meet customer capacity requirements is part of the asset management plan.

Evaluation Criteria summary

4.1 Opportunities and threats in the system environment are assessed **A1**

Response: Opportunities are unlikely outside mining initiatives. The facilities are subject to SWIN network threats such as outages, voltage, frequency, fault and stability performance.

4.2 Performance standards (availability of service, capacity, continuity, emergency response, etc) are measured and achieved **A1**

Response: The AMS meets this criterion with service standards defined. There has not been a customer to apply them to and performance statistics from the Network Reliability Code are not applicable without a customer.
With Western Power wheeling power to their customer they will be responsible the power quality and supply continuity and metering requirements for that customer.
As supply is to the mining industry, capacity is only considered on a project by project basis. Forecasting for expansion is not relevant in this environment. Mining expansion is not predictable in the normal sense as it is heavily dependent on exploration and metal markets.

4.3 Compliance with statutory and regulatory requirements **A1**

Response: The Licensee's HR policy documents require compliance with statutory and regulatory obligations. There have been no noted environmental breaches for the assets covered by the licence during the review period.
Procedures at site require environmental approval for new projects, clearing of ground, protection of threaten birdlife and other activities that impact the environment. Policy documents were sighted.

4.4 Achievement of customer service levels **A1**

Response: The AMP defines the customer service levels. Environmental requirements are met. There are no external customers to consider as part of the environment and outages.

Asset management process and policy definition

Process	☑	Policy	☑	Documentation	☑	

Evidence: interviewed Senior HV Engineer, listed staff and staff on site listed.

Documents: Environmental Plans and Approvals, Reticulation plans, Asset management plan, Risk management policy, Risk register, Project management manual						
Asset management performance						
Process	☑	Availability	☑	Use	☑	
Issues						
There are no environmental non-compliances reported. Karara monitors and considers the mining environment in which it operates.						
Recommendation						
None						

Asset operations	Process/Policy rating A	Effectiveness rating 1

5. Asset operations

Operations functions relate to the day-to-day running of assets and directly affect service levels and costs.

Observations

Policies and procedures for asset operation / sample activities

The system is operated by Western Power from the Three Springs end and by Karara at the mine end. The asset operation is appropriate for the duty.

The line from Eneabba to Three springs (about 98km) was transferred to Western Power in the audit period. Western Power operated and maintained this segment both before and after the transfer. The use of the second circuit by Western Power for its customer (Golden Grove) was cut over on 31 March 2015. The Licensee had no control over these segments at any time.

The demands of the mining process dictate continuous supply but due to the nature of radial feed supply some interruptions are always going to occur.

The Licensee records outages manually. The service levels are defined.

The asset register is part of the maintenance system and supported by spread sheets and standard procedures.

Training/ resources / exceptions

The Licensee and Western Power operate the plant. The resourcing is considered appropriate for the size of the network and ongoing training is evident, as are the operating procedures and practices. Plant operation and related maintenance appears to take due allowance of any possible faults or operating requirements in the licensed plant.

Evaluation Criteria summary

5.1 Operational policies and procedures are documented and linked to service levels required **A1**

Response: The AMS meets this criterion with service standards defined. Due to the size and topology of the network there is no requirement for additional formal documentation.
The Transmission system is static and does not require operation outside maintenance/fault switching. Operational policies are substantially maintenance/reliability matters and those dictated by SWIN system requirements.

5.2 Risk management is applied to prioritise operations tasks **A1**

Response: There is very little operational control as the assets are predominantly operated for maintenance requirements. Simple risk analysis is applied by developing a task hazard analysis for all tasks on the site.

5.3 Assets are documented in an Asset Register including asset type, location, material, plans of components, an assessment of assets physical/structural condition and accounting data **A1**

Response: Asset registers are contained with the appropriate information in the Ellipse system with each tower listed as an asset.

5.4 Operational costs are measured and monitored **A1**

Response: Operational costs – staffing, contracts and materials are measured and monitored. These are not significant to profitability or viability in the context of

the core business being mining. The mining operations cover energy infrastructure and operational costs.

5.5 Staff resources are adequate and staff receive training commensurate with their responsibilities **A1**

Response: The staff receives training commensurate with their responsibilities. Personnel undergo HV Operator training for switching operations at established training centres followed by on site approval and appointment under Mining Regulations.

Karara follows a standard isolation permit procedure across all sites. Staff are adequate for effective operation of the plant.

Asset management process and policy definition						
Process	☑	Policy	☑	Documentation	☑	

Evidence: interviewed Senior HV Engineer, listed staff and staff on site listed. Documents: Asset Register, Environmental Plans and Approvals, Spares List, Commissioning Plans, Karara Mining energy budget, Reticulation plans, Asset management plan, Risk management policy, Risk register, Project management manual.

Asset management performance						
Process	☑	Availability	☑	Use	☑	

Issues

The asset operation is appropriate for the duty.

Recommendation

None

Asset Maintenance	Process/Policy rating A	Effectiveness rating 1

6. Asset maintenance

Maintenance functions relate to the upkeep of assets and directly affect service levels and costs.

Observations

Policies and procedures for asset maintenance / sample activities

The Ellipse business application is used by Karara

The asset management plan contains performance measures and lists significant maintenance plans.

The Licensee engages contractors to service their major maintenance outages as required for the Three Springs/mine section. Western Power are contracted to maintain the Eneabba to Three Springs section that they assumed ownership of during the review period. The line was cut over on 31 March 2015. Condition inspection of the lines is routinely carried out. Inventory of critical spares has been developed.

Training / resources / exceptions

Maintenance is scheduled well into the future and these actions are appropriate for the type of equipment. The resourcing is appropriate and ongoing training is evident as are the operating procedures and practices. High Voltage training occurs at Registered Training Organisations. Plant maintenance appears to take account of any expected failures in the licensed plant.

Evaluation Criteria summary

6.1 Maintenance policies and procedures are documented and linked to service levels required **A1**

Response: Policies and procedures are documented. The AMP supports this criterion with service standards defined.

6.2 Regular inspections are undertaken of asset performance and condition **A1**

Response: The Ellipse maintenance planning system fulfils this criterion by regular scheduling of inspections to assess condition. Time based schedules are set up for physical inspection, testing and collection of samples for condition based analysis (eg Corona, thermo-graphic, etc).

6.3 Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule **A1**

Response: Corrective (condition based) and preventative maintenance plans can be recorded in the Ellipse system but the line is too new for condition based issues yet. The electrical and shutdown maintenance planners run the maintenance process.

6.4 Failures are analysed and operational/maintenance plans adjusted where necessary A1

Response: Failures are infrequent. The Licensee has not had any failures of their plant with outages being from external sources such as Western Power equipment, lightning bushfires or system outages. There was no evidence of significant failure warranting adjustment of the plans within the review period.

6.5 Risk management is applied to prioritise maintenance tasks **A1**

Response: Maintenance tasks and frequencies have been developed over a period of time using local experience and industry standards applied at the mine.

6.6 Maintenance costs are measured and monitored

Response: Maintenance costs are recorded, measured and monitored by the site.						
Asset management process and policy definition						
Process	☑	Policy	☑	Documentation	☑	
Evidence: interviewed Senior HV Engineer, listed staff and staff on site listed. Documents: Asset Register, Environmental Plans and Approvals, Spares List, Commissioning Plans, Reticulation plans, Asset management plan, Risk management policy, Risk register, Project management manual						
Asset management performance						
Process	☑	Availability	☑	Use	☑	
Issues						
None.						
Recommendation						
None						

Asset Management Information System	Process/Policy rating	Effectiveness rating
	A	1

7. Asset Management Information System (MIS)

An asset management information system is a combination of processes, data and software that support the asset management functions

Observations

Policies and procedures

The Licensee has a competent asset management information system with a number of elements. The maintenance management system based on the Ellipse business software system V6.31 (described in section 6 above). The system allows for both time based and condition based activities. The system was viewed. The Licensee uses standard financial packages.

The maintenance system links project management to scheduled tasks to standard work plans, asset register and parts inventory. Documentation and familiarity of the system appears appropriate.

Access to write to the database is controlled (passwords) and changes are tracked. There is good documentation for data recovery procedures which include operating on the Perth office server and backing up the servers to ensure data integrity.

The reliability of the plant is evidence of good maintenances practices and that exceptions are being followed up.

Evaluation Criteria summary

7.1 Adequate system documentation for users and IT operators **A1**

Response: The Ellipse system is well documented. The system is intuitive with online assistance and documentation is rarely required. The viewing of Historic data is also intuitive.

7.2 Input controls include appropriate verification and validation of data entered into the system **A1**

Response: The system is easy to use with a maintenance focus rather than a database focus and includes appropriate verification and validation of data entered into the system.

7.3 Logical security access controls appear adequate, such as passwords **A1**

Response: Logical control is adequate with hierarchical access by password. Personnel are automatically logged out of computer systems after periods of inactivity.

7.4 Physical security access controls appear adequate **A1**

Response: Physical security is adequate with the system on access controlled mine sites.

7.5 Data backup procedures appear adequate and backups are tested **A1**

Response: Data backup is reported by the site IT personnel to be carried out daily and weekly on all servers. Backups are tested.

7.6 Key computations related to Licensee performance reporting are materially accurate **A1**

Response: There is minimal regular computation work. Key computations related to Licensee performance reporting are materially accurate, to the extent possible to assess with visual inspection.

7.7 Management reports appear adequate for the Licensee to monitor licence obligations **A1** Response: No detailed management reports are generated by the Ellipse system which would assist to monitor licence obligations. The key reports are for outage logging and the capacity to develop appear adequate.						
Asset management process and policy definition						
Process	☑	Policy	☑	Documentation	☑	
Evidence: interviewed Senior HV Engineer, listed staff and staff on site listed. Documents: Karara Mining energy budget, Asset management plan, Ellipse overview. Viewed Ellipse, viewing of Historical database.						
Asset management performance						
Process	☑	Availability	☑	Use	☑	
Issues						
None						
Recommendation						
None						

Risk management	Process/Policy rating	Effectiveness rating
	A	1

8. Risk management

Risk management involves the identification of risks and their management within an acceptable level of risk.

Observations

Policies and procedures

The Licensee has a documented risk management procedure and there is evidence that risk based approaches is being carried out.

The Licensee has assessed and prioritised the threats to specific plant and developed contingencies for these threats which are based on assessment of risks.

The power quality measurement plan is a strategy to mitigate quality/reliability threats. The power quality at Karara is a joint effort between Western Power and Karara based on the agreed operating parameter for the final supply. This stipulates maintenance of power factor, and a range of reactive power within which Karara operates and achieves this by using STATCOMS installed at Karara 330kV substation.

Training

There is evidence of training and awareness by staff of risk based approaches.

Evaluation Criteria summary

8.1 Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system **A1**

Response: The AMS meets this criterion. The risk management section of the plan and Risk Plan set out risks, risk assessment and risk mitigation.

8.2 Risks are documented in a risk register and treatment plans are actioned and monitored. **A1**

Response: The risk process is set out in the AMP. There is a risk register of Karara Mining which includes the Licensee.

8.3 The probability and consequences of asset failure are regularly assessed **A1**

Response: During the review period, the risks of asset failures have been assessed based on probability and consequence parameters.

Asset management process and policy definition

Process	☑	Policy	☑	Documentation	☑	

Evidence: interviewed Senior HV Engineer, listed staff and staff on site listed. Documents: Asset Register, Environmental Plans and Approvals, Spares List, Commissioning Plans, Reticulation plans, Asset management plan, Risk management policy, Risk register, Project management manual

Asset management performance

Process	☑	Availability	☑	Use	☑	

Issues

None
Recommendation None

Contingency planning	Process/Policy rating B	Effectiveness rating 2

9. Contingency planning

Contingency plans document the steps to deal with the unexpected failure of an asset.

Observations

Development of contingency plans / currency

The Licensee has good documentation of its data recovery plans.

The Licensee has documented the threats to specific plant but not yet developed contingencies for these threats. An inventory of spare parts has been developed.

The Licensee has detailed maintenance scheduled out for several years, with minor and major shutdowns allowed to deal with potential issues. Maintenance is partly conducted on condition based maintenance which monitors critical items for indicators of future failure (eg Corona, thermo-graphic assessment, tower/line inspections).

The maintenance regime is geared to keeping the plant operational without forced outages.

The power quality measurement plan (a strategy to mitigate quality/reliability threats) is carried out by Western Power.

Testing of contingency plans

The plans have not been developed during the review period but have been since. There has been no test yet.

The company conducts major incident training for the emergency services crews at site.

Evaluation Criteria summary

9.1 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks **B2**

Response: The AMS does not meet this criterion Critical spares are identified and being sourced. Standard spares such as insulators are on site. Contingency plans have not been developed during the review period but have been since. There has been no test yet.

Asset management process and policy definition

Process	☑	Policy	☑	Documentation	☑	

Evidence: interviewed Senior HV Engineer, listed staff and staff on site listed. Documents: Asset Register, Environmental Plans and Approvals, Spares List, Reticulation plans, Asset management plan, Risk management policy, Risk register, Project management manual.

Asset management performance

Process	☑	Availability	☑	Use	☑	

Issues

Contingency plans have not yet been tested.

Recommendation
Schedule testing of the contingency plans.

Financial planning	Process/Policy rating B	Effectiveness rating 2

10. Financial planning

The financial planning component of the asset management plan brings together the financial elements of the service delivery to ensure its financial viability over the long term.

Observations

Financial planning process / plans

The Licensee carries out budgeting and monitoring processes. These are on 1 year and 5 year cycles and upgraded year by year. Long ranges forecasting provides business outlook over the next 5 years. With Western Power wheeling power to their customer (Golden Grove) and there will be minimal income ($1). Costs are budgeted and funded by mining operations.

Costs are accrued monthly and estimates updated quarterly, The expenditure reports go to the parent body's executives. There is a financial philosophy document together with the budget which is a financial plan given the simplicity of the financial model. *Evaluation Criteria summary*

10.1 The financial plan states the financial objectives and strategies and actions to achieve the objectives **A1**

Response: The Licensed assets are a small part of the company core business of mining which will determine the viability of the operations. The licensed electrical assets are part of that budgeting process. The overall budgets are related to objectives / strategies and actions to achieve the objectives of reliability and continuity of supply. There is no income at present. There is a financial budget which is a financial plan given the simplicity of the financial model.

10.2 The financial plan identifies the source of funds for capital expenditure and recurrent costs **A1**

Response: The Licensed assets are a small part of the mining electrical assets and are part of that budgeting process. The overall budget identifies the source of funds for capital expenditure and recurrent costs. All capital expenditure will be funded from mining. Minimal capital is required for other reasons except those arising from SWIN network issues.

10.3 The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets) **A1**

Response: As the network is only part of the core business of mining detailed financial plans for the network are not relevant. Detailed financial plans for the mine are prepared. The Licensed assets do not attempt operating statements (profit and loss) and statement of financial position (balance sheets) but monitors costs with respect to budgets.

10.4 The financial plan provide firm predictions on income for the next five years and reasonable indicative predictions beyond this period **A1**

Response: The licensee does not predict income for access to the network as any customers do not yet exist and do not charge the parent miner for electricity as income. Profitability of the network per-se is immaterial.

10.5 The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services **A1**

Response: The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services.

10.6 Significant variances in actual/budget income and expenses are identified

and corrective action taken where necessary Response: When significant variation in expenditure or budget are noted this is investigated.	**A1**

Asset management process and policy definition						
Process	☑	Policy	☑	Documentation	☑	
Evidence: interviewed Senior HV Engineer, listed staff and staff on site listed. Documents: Karara Mining energy budget,						
Asset management performance						
Process	☑	Availability	☑	Use	☑	
Issues						
None						
Recommendation						
None						

Capital expenditure planning	Process/Policy rating A	Effectiveness rating 1

11. Capital expenditure planning

The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure on each over the next five or more years.

Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates.

Observations

Capital expenditure process / plans

The Licensee has budgeting and monitoring processes. These are on 1 year and 5 year cycles and upgraded year by year. Long ranges forecasting provides business outlook over the next 5 to 10 years.

Capital expansion and expenditure is justified against mining projects. The funds for expansion or rearrangement of the network are provided from the mine project requiring the change.

Evaluation Criteria summary

11.1 There is a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates **A1**

Response: The AMP sets out “capital expenditure” but there is no significant expenditure planned.

11.2 The plan provides reasons for capital expenditure and timing of expenditure **A1**

Response: The AMP does not set out “capital expenditure” values as these are unlikely in the near future.

11.3 The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan **A1**

Response: The AMP sets out that the asset life is most likely to be governed by mine life rather than asset life. The plan responds to asset condition.

11.4 There is an adequate process to ensure that the capital expenditure plan is regularly updated and actioned **A1**

Response: The AMP sets out a review process. Karara has financial review processes.

Asset management process and policy definition

Process	☑	Policy	☑	Documentation	☑	

Evidence: interviewed Senior HV Engineer, listed staff and staff on site listed. Documents Karara Mining energy budget,

Asset management performance

Process	☑	Availability	☑	Use	☑	

Issues

None.
Recommendation
None

Review of AMS	Process/Policy rating B	Effectiveness rating 2

12. Review of AMS

The asset management system is regularly reviewed and updated.

Observations

As a supplier of electricity the service delivery is heavily asset based and needs an AMS. There is ongoing review of the asset management plan.

Evaluation Criteria summary

12.1 A review process is in place to ensure that the asset management plan and the asset management system described therein are kept current **B2**

Response: The AMP assigns responsibility for review of the AMS to the Utilities Superintendent. A review process is in place to ensure that the asset management plan and the asset management system described therein are kept current, but the scheduled review has not occurred. The churn of staff in the review period is a contributory factor.

12.2 Independent reviews (eg internal review) are performed of the asset management system **B2**

Response: The AMP is too new for an formal review but a formal review should be scheduled in 2017 (5 years from commencement of operation) and internal reviews at 2-yearly intervals from 2014.

Asset management process and policy definition

Process	☑	Policy	☑	Documentation	☑	

Evidence: interviewed Senior HV Engineer, listed staff and staff on site listed. Documents: Transmission Licence, Asset Register, Environmental Plans and Approvals, Spares List, Commissioning Plans, Karara Mining Financial reports, Reticulation plans, Asset management plan, Risk management policy, Risk register, Project management manual

Asset management performance

Process	☐	Availability	☐	Use	☐	

Issues

The Asset Management System requires scheduled internal reviews every 2 years and formal review every 5 years. The scheduled review in 2014 did not take place. There has been a considerable churn of staff which has not facilitated the reviews to take place.

Recommendation

Schedule internal reviews every 2 years, starting in 2018, and formal review every 5 years, beginning in 2017, for the Asset Management System.

3 PHOTOGRAPHS

Three Springs Terminal

Tower for connection for Golden Grove at Three Springs end

Three Springs to Karara dual circuit (& old WPC Golden Grove Line)

Single circuit at Mungarda Road

At Karara

Karara Terminal

Karara Terminal