ABN 20 009 454 111

Audit Report

RATCH-Australia Kemerton Pty Ltd Electricity Generation Licence Performance Audit And Asset Management System Review

June 2013

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Executive Summary

RATCH-Australia Kemerton PL (RATCH) holds an electricity generation licence (EGL5) issued by the Economic Regulation Authority (the Authority) under Sections 7 and 15 of the Electricity Industry Act 2004 (WA) (the Act). The licence enables RATCH to construct and operate electricity generation facilities in accordance with the licence conditions.

Sections 13 and 14 of the Act requires RATCH to provide the Authority with a report by an independent expert on the measures taken by the licensee to meet the performance criteria specified in the licence and on the effectiveness of their Asset Management System. In April 2013 RATCH commissioned Qualeng to carry out the performance audit of their licence compliance and the Asset Management System review for the period 1 April 2010 to 31 March 2013. The audit and review (the audit) have been conducted and this report prepared in accordance with the Authority's "Audit Guidelines: Electricity, Gas and Water Licences (August 2010)" (the guidelines).

THE ASSETS

Kemerton Power Station is located 25 km north east of Bunbury in Western Australia. The plant is operated by Transfield Worley Power Services Pty Ltd (TWPS) which has been contracted to provide the operation and maintenance services.

The power station consists of two dual fuel open cycle Siemens SGT5-2000E gas turbines, (also known as V94.2) turbines with a total generating capacity of 310 MW.

THE AUDIT

The audit was conducted through meetings at the power station office and through a document review.

The evaluation of the system effectiveness was carried out through an assessment of the control environment, information system, control procedures, supporting documentation and compliance attitude.

The final report includes:

(i) a summary of the objectives, the scope of the task and details of this audit;

(ii) key findings and recommendations from this audit and

(iii) a post audit and review implementation plan listing the audit recommendations, responses and actions proposed by RATCH. Although this plan does not form part of the report, it is included to complete the documentation.

LICENSEE'S RESPONSE TO PREVIOUS REVIEW RECOMMENDATIONS

The corrective actions taken by RATCH to address the recommendations of the 2010 audit were assessed during the audit. In regard to the actions arising from the Performance Audit 2010, all actions have been closed, one opportunity for improvement was not adopted.

In regard to the Asset Management System Review 2010, the actions on the IT back up system had been closed, however due to changes in the process the actions have been noted in this report. The remainder action on budget plans was closed.

All outstanding actions from the 2010 Audit have been accounted for and no further actions are in progress.

SUMMARY REVIEW OF THE PERFORMANCE AUDIT

On completion of the performance audit the auditor has formed the opinion that, during the period of 1 April 2010 to 31 March 2013 RATCH-Australia Kemerton's operation was in general compliance with the licence conditions apart from findings on licence clauses 5, 15.1 and 16 which relate to:

- not meeting the licence obligations on two occasions during the audit period in relation to the late advice to the Authority of the licensee name change and a late environmental ministerial compliance report;
- not regularly performing multidiscipline asset risk analysis or workshops and not using an asset risk register.

PERFORMANCE AUDIT EFFECTIVENESS SUMMARY

The findings of the audit are summarised in Table 1 below, keys to compliance

ratings are listed in Table 2, a full report on the audit findings is included in section "2.2 Audit Summary".

Table 1: Performance audit compliance summary

Operating Area	**Operating License Reference** (Cl.= Clause, Sch.=Schedule)	**Consequence** (1= minor, 2= Moderate, 3= major)	**Likelihood** (A= likely, B= probable, C= unlikely)	**Inherent Risk** (Low, Medium, High)	**Adequacy of existing controls** (S= Strong, M= Moderate, W= Weak)	**Compliance Rating** 1-2 Non compliant 3-5 Compliant (Refer to **Table 2** for details)						
SERVICE DELIVERY						1	2	3	4	5	N/A	N/R
Definitions and interpretation	Cl 1										X	
Grant of licence	Cl.2 (Sch2)	1	C	Low	S					4		
Term	Cl 3	1	C	Low	S					4		
Fees	Cl 4	1	C	Low	S				4			
Compliance	Cl.5	2	C	Med	S			4				
Transfer of licence	Cl 6											X
Cancellation of licence	Cl 7											X
Surrender of licence	Cl 8											X
Renewal of licence	Cl 9											X
Amendment of licence (licensee)	Cl 10	2	C	Med	M					4		
Amendment of licence (Authority)	Cl 11	2	C	Med	M					4		
Accounting records	Cl 12	2	C	Med	S					4		
Individual performance standards	Cl 13											X
Performance audit	Cl 14	2	C	Med	S					4		
Reporting a change in circumstances	Cl 15	2	C	Med	M			4				
Provision of information	Cl 16	1	C	Low	S			4				
Publishing information	Cl 17											X
Notices	Cl 18	1	C	Low	S					4		
Review of the Authority's decisions	Cl 19											X

Operating Area	Operating License Reference (Cl.= Clause, Sch.=Schedule)	Consequence (1= minor, 2= Moderate, 3= major)	Likelihood (A= likely, B= probable, C= unlikely)	Inherent Risk (Low, Medium, High)	Adequacy of existing controls (S= Strong, M= Moderate, W= Weak)	Compliance Rating 1-2 Non compliant 3-5 Compliant (Refer to **Table 2** for details)						
SERVICE DELIVERY						1	2	3	4	5	N/A	N/R
Asset management system	Cl 20	3	C	High	S					4		

Table 2: Performance compliance rating scale

Compliance Status	Rating	Description of Compliance
COMPLIANT	5	Compliant with no further action required to maintain compliance.
COMPLIANT	4	Compliant apart from minor or immaterial recommendations to improve the strength of internal controls to maintain compliance.
COMPLIANT	3	Compliant with major or material recommendations to improve the strength of internal controls to maintain compliance.
NON-COMPLIANT	2	Does not meet minimum requirements.
SIGNIFICANTLY NON-COMPLIANT	1	Significant weaknesses and/or serious action required.
NOT APPLICABLE	N/A	Determined that the compliance obligation does not apply to the licensee's business operations
NOT RATED	N/R	No relevant activity took place during the audit period, therefore it is not possible to assess compliance

ASSET MANAGEMENT REVIEW EFFECTIVENESS SUMMARY

RATCH has demonstrated to have a suitable plan to manage the different aspects of the asset management systems.

The review has found that RATCH has a detailed asset management plan, reporting extensively on plant status and performance. Appropriate contractual agreements are in place to guarantee revenue and manage the operation of the plant. The site operation relies greatly on the skills of personnel to manually plan and commit to the operation and maintenance of the assets.

Further work is required in some of the areas of the asset management system, actions are in progress in some of these areas:

- update the asset risk register and review the probability and consequences of asset failures through a multidiscipline assessment, identifying severity of risks and required actions; ensure that multidiscipline risk workshops are performed regularly;
- monitor the effectiveness of RATCH Licence and Permit Register for managing compliance;
- utilise the asset register to a greater extent to include additional information required by the Authority;
- determine what training is required to maintain competency and maintain currency of competencies;
- clarify the maintenance schedule for the different plant systems;
- address the documentation of both the offsite and local IT back up systems;
- test contingency plans and address lapsed training;
- identify projects and issues in the capital expenditure plan.

Overall the review found that the licensee was managing the assets satisfactorily, however, in areas noted above, the systems will need reappraisal and updating.

The review of the Asset Management System is summarised below in Table 3. Definition of the ratings is given in Table 4 and Table 5.

Table 3: Asset management effectiveness summary

ASSET MANAGEMENT SYSTEM	Asset management process and policy definition adequacy ratings	Asset management performance ratings
1. Asset planning	**B**	**2**
2. Asset creation/ acquisition	**B**	**2**
3. Asset disposal	**B**	**1**
4. Environmental analysis	**B**	**2**
5. Asset operations	**B**	**2**
6. Asset maintenance	**B**	**2**
7. Asset management information system	**B**	**2**
8. Risk management	**C**	**2**
9. Contingency planning	**C**	**3**
10. Financial planning	**B**	**2**
11. Capital expenditure planning	**B**	**2**
12. Review of asset management system	**B**	**2**

Table 4: Asset management process and policy definition adequacy ratings

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).

Rating	Description	Criteria
C	Requires significant improvements	• 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).

Table 5: Asset management review performance rating scale

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.

POST AUDIT ACTION PLAN

The audit has resulted, where applicable, in findings and recommendations that require corrective actions by the Licensee.

The recommendations have been listed in the Post audit Implementation Plan 2013. Responses including actions, responsibilities and dates for completion have been completed by the Licensee. A copy of the plan is attached in Appendix A.

This report is an accurate representation of the findings and opinions of the auditors following the review of the client's conformance to nominated Licence conditions. The audit is reliant on evidence provided by other parties and is subject to limitations due to the nature of the evidence available to the auditor, the sampling process inherent in the audit process, the limitations of internal controls and the need to use judgement in the assessment of evidence. On this basis Qualeng shall not be liable for loss or damage to other parties due to their reliance on the information contained in this report or in its supporting documentation.

The Post Audit Implementation Plan is a document prepared by the licensee in response to the recommendations provided by the audit. As it represent the licensee's views and actions it does not form part of the audit, however it has been included in Appendix A in order to complete the documentation of the audit and in accordance with the Authority's Guidelines.

Approvals				
Representation	Name	Signature	Position	Date
Auditor:	M Zammit		Lead Auditor / Projects Director, Qualeng	28 June 2013

Ref:	46/2		
Issue Status			
Issue No	Date	Description	Approved
A	26/6/2013	Draft Issue	MZ
B	26/6/2013	Revised and reissued	MZ
1	28/6/2013	Reissued with completed Post Audit Implementation Plan	MZ

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1 OBJECTIVES AND SCOPE OF REVIEW

1.1 BACKGROUND

RATCH-Australia Kemerton Pty Ltd (RATCH) supplies electricity to the West Australia's South West Interconnected System (SWIS) under the EGL5 electricity generation licence (the licence) granted by the Economic Regulation Authority (the Authority) on 20 March 2006 and amended to Version 6 on 26 September 2012.

The licence has been issued under Sections 7 and 15 of the Electricity Industry Act 2004 (WA) (the Act) and enables the licensee to construct and operate the power generating facilities and supply up to 310 MW nameplate generating capacity in accordance with the licence conditions.

The power station site is located 25 km north east of Bunbury in Western Australia. The plant is operated by Transfield Worley Power Services Pty Ltd (TWPS) which has been contracted to provide the operation and maintenance services for the facility under an Operations and Maintenance Alliance Agreement (OMAA). RATCH has a connection agreement with Western Power, the Network Operator and a 25 year Power Purchase Agreement (PPA) with Verve Energy, which commenced on 1 November 2005.

The power station consists of two Siemens SGT5-2000E gas turbines, (also identified as V94.2), with a total generating capacity of 310 MW. The facility also includes:

Under sections 13 and 14 of the Act RATCH's systems must be subject to independent reviews and audits at 24 months intervals (or longer if allowed by the Authority) to report the licensee compliance against the licence conditions. Qualeng has been engaged by RATCH to conduct the performance audit and the asset management system review (the audit) for the period 1 April 2010 to 31 March 2013.

The audit has been conducted and this report prepared in accordance with the Authority's "Audit Guidelines: Electricity, Gas and Water Licences (August 2010)" (the

guidelines).

1.2 AUDIT OBJECTIVES

The purpose of the performance audit is to:

- *Assess the effectiveness of measures taken by the licensee to meet the obligations of the performance and quality standards referred to in the licence.*

The purpose of the asset management system review is to:

- *Assess the effectiveness of the measures taken by the licensee for the proper management of assets used in the provision and operation of services and, where appropriate, for the construction or alteration of relevant assets.*

1.3 AUDIT SCOPE

1.3.1 Scope of Performance Audit

The scope of the performance audit is to audit the licensee systems and processes to assess their effectiveness in ensuring compliance with the standards, outputs and outcomes required by the licence, in detail:

- Assess the effectiveness of systems and procedures and the adequacy of internal controls;
- Consider performance against standards prescribed in the licence;
- Provide assurance of compliance to systems and procedures, existence of control and system outputs / records;
- Completeness and accuracy of performance reporting to the Authority;
- Compliance with any individual licence conditions.

1.3.2 Scope of Asset Management System Review

The scope of the asset management system review includes the assessment of the adequacy and effectiveness of the licensee's asset management system by evaluating the key processes of:

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

Each of the system processes was evaluated against effectiveness criteria defined in the guidelines.

1.4 AUDIT PERIOD

The audit covers the three year period from 1 April 2010 to 31 March 2013. The audit was carried out between April and June 2013.

1.5 AUDIT METHODOLOGY

The audit followed the methodology defined in the Authority's the guidelines including:

- Review of documentation
- Preparation of an audit plan, risk assessment and system analysis;
- Fieldwork including the document review and meetings;
- Reporting.

These activities were supported by additional investigations to further clarify aspects of the procedures.

An audit plan was prepared which outlined the objectives, scope, risk assessment, system analysis, fieldwork plan, the report structure, key contacts and auditing staff.

The audit adopted a risk based approach where a preliminary risk and materiality assessment was carried out for each licence condition to evaluate the risks resulting from non-compliance and/or lack of controls.

The existing controls were rated and an audit priority assigned based on the risk resulting from lack of controls. Tests were also defined for each licence condition to assess the compliance and effectiveness of the current process.

With specific regard to the Asset Management Review, the review followed the methodology outlined above and defined in the guidelines. The risk assessment was carried out on each asset management system (AMS) element.

1.6 LICENSEE'S REPRESENTATION

Key contacts for the audit were:

- Mr Wayne Roberts, Station Manager, TWPS.

1.7 AUDITING TEAM

The auditing team members were:

- Mr Mike Zammit, Project Director and Lead Auditor;
- Mr Shaun Campbell, Senior Engineer, Document Reviewer and Verifier.

A summary of the resources utilised in the performance of the audit is listed below.

Item	*Resource*	*Description*	*Hours*
1	M Zammit	Project Director and Lead Auditor	TBA
2	S Campbell	Senior Engineer, Document Reviewer and Verifier	TBA

1.8 KEY DOCUMENTS AND INFORMATION

Main documents accessed by the auditors are listed in Appendix B.

1.9 LIMITATIONS AND QUALIFICATIONS

An audit provides a reasonable level of assurance on the effectiveness of control procedures, however there are limitations due to the nature of the evidence available to the auditor, the sampling process inherent in checking the evidence, the limitations of internal controls and the need to use judgement in the assessment of evidence.

In regard to the review process, the reviewer relies on evidence coming to the reviewer's attention showing that the control procedures are not effective, when the initial process and procedures do not provide sufficient evidence to the level that would be required by a review.

As noted above, due to the sampling process, the nature of the evidence available to the auditor, the limitations of internal controls and the need to use judgement in the assessment of evidence there are limitations in the level of accuracy that can be obtained in the audit and in the review and errors and non-compliances may remain undetected.

The Post Audit and Review Implementation Plan (PAIP) is a document prepared by the licensee in response to the recommendations provided by the audit. As it represents the licensee's views and actions it does not form part of the audit, however it has been included in Appendix A in order to complete the documentation of the audit and in accordance with the guidelines.

1.10 ABBREVIATIONS

AMP	Asset Management Plan
AMIS	Asset Management Information System
AMS	Asset Management System
AS	Australian Standard
Authority	Economic Regulation Authority
CAPEX	Capital Expenditure
HV	High voltage
MCR	Maximum Continuous Rating

NAA	Network Access Agreement
NCC	Nominal Contracted Capacity
O&M	Operation and Maintenance
OFI	Opportunity for Improvement
OMAA	Operation & Maintenance Alliance Agreement
OPEX	Operating Expenditure
OSP	Operations Systems Plan
PAIP	Post Audit and Review Implementation Plan
VOM	Variable Operating and Maintenance
YTD	Year To Date

2 KEY FINDINGS AND RECOMMENDATIONS

2.1 LICENSEE'S RESPONSE TO PREVIOUS AUDIT RECOMMENDATIONS

Table 6 - Performance Audit Observations and Recommendations

Item	Licence Conditions	Findings and Recommendation	Proposed Actions and Status	Findings
-	Generation Licence condition 12.1 The licensee may expand or reduce the generating works if the relevant expansion or reduction is provided for in the asset management system.	Although there is a trigger for inclusion of plant change in the Asset Management Plan within the PPA and O&M Alliance Agreement. A section within the Asset Management Plan highlighting the link to the Generation Licence may assist future compliance. Compliance Rating: Compliant [4] Recommendation: Consideration could be given to including this requirement in the Asset Management Plan as a section for consideration i.e. any plant change to generating works would require ERA notification.	Action Plan not mandatory for inclusion in post audit implementation plan as detailed in Audit Guidelines (July 2009) Section 121.9. This item will be reviewed and actioned through internal management systems and will form part of the next Audit/Review process.	Compliance with obligations is now through a "RATCH Australia - Licence and Permit Register". CLOSED
82	Generation Licence Condition 16.1 - Electricity Industry Act section 14 (1)(a) The licensee must provide for, and notify the Authority of, an asset management system in relation to the generating works within 2 business days from the commencement date or from the completion of construction of the generating works, whichever is later.	Transfield Services breached the licence condition 16.1 to inform the Authority of an asset management system for Kemerton Power station on the completion of generation works in 2005. This was identified in the previous audit but as notification was not until the 29th July 2008 the licensee was non compliant for a period of 120 days during this audit period. It is noted that this non compliance has been	ACTION: Nil. The Authority was notified on the 29th July 2008. RESPONSIBILITY: Wayne Roberts, Plant Manager DATE: COMPLETE	No action has taken place. CLOSED

Item	Licence Conditions	Findings and Recommendation	Proposed Actions and Status	Findings
		actioned already. Completion of wet compression project does not fall under generating works. Recommendation: Review the opportunities to include a trigger to correspond with the Authority outlining project and requesting confirmation that the project does not require conditions of Clause 16.1 to avoid future ambiguity for example, inclusion in the capital works approval process or other such mechanism.		
83	Generation Licence Condition 16.2 - Electricity Industry Act section 14 (1)(b) A licensee must notify details of the asset management system and any substantial changes to it to the Authority.	In the Annual Compliance Report for 1 July 2008 to 30 June 2009 the organisation detailed the non-compliance relating to the failure to notify the Authority of a substantial change to the Asset Management System. In a letter to the Authority dated 29th July 2008 the licensee rectified this issue. It is noted that this was identified in the previous audit report as a requirement after discussions with the Secretariat. It is noted that in the letter to the ERA the Licensee erroneously identified a review of the Asset Management Plan as a material change. Compliance Rating: Compliant [4] Recommendation: A periodic audit of the licence requirements may also assist the organisation in ensuring key timeframes are achieved.	Action Plan not mandatory for inclusion in post audit implementation plan as detailed in Audit Guidelines (July 2009) Section 121.9. This item will be reviewed and actioned through internal management systems and will form part of the next Audit/Review process.	A periodic audit, the TWPS internal Operations Systems Plan (OSP) audit is held annually, last held in December 2012. This audit does not specifically focus on the licence requirements. CLOSED

Post Review Implementation Plan 2010

Item	Licence Conditions	Findings and Recommendation	Proposed Actions and Status	Findings
7.5	Asset Management Information System Data backup procedures appear adequate Review Priority - 4 Effectiveness Rating – A2	Currently the backup procedure is understood through verbal instructions and no procedure was viewed. Recommendation: To develop procedural documentation to detail the process in relation to daily and monthly back up of server.	ACTION: A procedure will be developed and implemented at site regarding data back-ups. RESPONSIBILITY: Wayne Roberts, Plant Manager DATE: 17th September 2010 ACTION STATUS: Completed. A written procedure has been developed that documents the data back-up process that has been in place since the start of operations 2005.	A procedure was prepared "Back Up System Process" TMP-0000-IT-0001, including sign-off sheets. These were signed between 4 Jan 2010 to 1 Oct 2010 when the process was replaced by a corporate procedure. Evidence of an off site back up procedure was through an e-mail from Perth corporate office however the e-mail was generic and it was not clear the extent of local system covered by the procedure. A new action has been noted in this report.
7.5	Asset Management Information System – Data backup procedures appear adequate Review Priority - 4 Effectiveness Rating – A2	Since the Station has been operation data has been backed up however a test of retrieving data from backup tapes has never been carried. Recommendation: To test the backup tapes for effective retrieval of data.	ACTION: Perform data retrieval test of both daily and monthly backups. RESPONSIBILITY: Wayne Roberts, Plant Manager DATE: 17th September 2010 ACTION STATUS: Completed. A successful data retrieval test was performed from back-up tapes to the site server.	Since Oct 2010 when the system has been replaced by a corporate procedure. Evidence of an off site back up procedure was through an e-mail from Perth corporate office however the e-mail was generic and it was not clear the extent of local systems covered by the procedure. A new action has been noted in this report.
10.4	Financial Planning- The financial plan provide firm predictions on income for the next five years and reasonable indicative predictions beyond this period Review Priority – 4 Effectiveness Rating – A3	The financial plan forecasts two years (on a monthly basis) of income and operating expenditure, instead of the required five years. Recommendation: Extend current 2 year plan to 5 years to meet the requirements of criteria 10.4	ACTION: Expand current financial budget plans to rolling 5 year forecasts. RESPONSIBILITY: Geoff Dutton, General Manager Assets. DATE: 1st July 2011 ACTION STATUS: Completed. Financial budgets have been expanded to a rolling 5 year forecasts based upon the financial model that extends to end of power purchase agreement (PPA) in 2030.	The financial model was viewed and included forecasts of income over the required period. CLOSED

Item	Licence Conditions	Findings and Recommendation	Proposed Actions and Status	Findings

2.2 AUDIT SUMMARY

The findings of the performance audit and asset management system review are reported in Table 7 and Table 8 respectively.

Each table separately rates RATCH-Australia Kemerton's operational performance and asset management process and policy definition adequacy and performance, in accordance with the Authority's performance summary requirements. The guidelines rating definitions are reproduced in Table 2, Table 4 and Table 5.

Where appropriate or where the performance audit has rated compliance obligations as 1, 2, or 3 recommendations are made to address the issue(s) that have resulted in those ratings. Where the adequacy of the asset management process and policy definition is rated C or D, or the asset management performance is rated 3 or 4, recommendations are included to address the issue(s) that have resulted in those ratings. The licensee's corrective actions are included in the Post Audit Implementation Plan, a copy of the plan is attached in Appendix A.

2.3 PERFORMANCE AUDIT SUMMARY TABLE

Key findings and recommendations arising from the Performance Audit are listed in the following table.

Item numbers refer either to the obligation number in the Authority's "Electricity Compliance Reporting Manual" or to identifiers "L1, L2" etc which are used to identify and cross-reference findings.

The "Licence Reference" column lists the applicable licence clause numbers. Obligations are listed in order of Licence Clause number.

LEGEND

Key	Description
►	Findings
1. Text	Recommendations
[**OFI**]	Opportunity for Improvement

Table 7 - Performance Audit Observations and Recommendations

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
L1	Cl 2	Grant of Licence Licensee is granted a licence for the licence area to construct and operate generating works or operate	Licensee has identified the licence area and is operating the plant in accordance with the conditions of the licence. The nameplate rating of the plant is 310 MW and the	5	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
		existing generating works in accordance with the terms and conditions of this licence	maximum contracted power to be supplied to the licensee's customer is 300 MW, however the maximum plant generation capacity is 342 MW. At times the network operator's System Management) has operated the plant in excess of nameplate rating in order to maintain the stability of the network.		
L2	Cl.2 (Sch1)	Licence Area The licence area is the area as set out in plan ERA-EL-119	Licensee demonstrated that the plant licence area corresponds to the licence boundaries in licence map ERA-EL-067, Issue A.	5	
L3	Cl 3	Term Licence commences on the commencement date (20 March 2006) and continues until the earlier of: (a) the cancellation of the licence (clause 7) (b) surrender of licence (c) expiry (29 April 2040)	Licence has been maintained from commencement, there have been no cancellation or surrender of the licence during the audit period.	5	
105 L4	Cl 4 Fees	Electricity Industry Act section 17(1) A licensee must pay to the Authority 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.	Initial licence was granted on 20 March 2006. Payment of licence fee noted for: • 2013: Invoice 100018 issued by Authority on 11 March 2013, approved for payment on 20 March 2013 and paid on 3 April 2013. • 2012, a Purchase Order for payment of the fee was issued on 12 March 2012 • 2011 a Purchase Order for payment of the fee was issued on 17 February 2011.	4	
	Cl 4.1	The licensee must pay the applicable fees in accordance with the Regulations			
L5	Cl.5	Compliance: The licensee must comply with all applicable legislation.	The licensee has prepared a "Licence and Permits Register". The licensee maintains the compliance schedule and follows up the operator TWPS to complete	3	1. Two non-compliances were noted and a corrective action is in place. The process has been revised with RATCH prompting and following up on compliance due dates. Monitor the performance of the new compliance system

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
			the actions for compliance with the licence. Two non-compliances were noted: ‣ Type 2 Non-compliance for not notifying the name change from Transfield Services Kemerton PL to RATCH Australia Kemerton PL on 7 February 2012, advised to the Authority on 11 July 2012; ‣ Environmental reports: Missing timely submission of annual "Environmental Ministerial Compliance Report for the period 2011-12" , as noted in report for 2013. A corrective action is in place. The process has been revised with RATCH prompting and following up on compliance due date.		for its effectiveness.
106	Cl 5.1	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.	The licensee has taken steps to minimise the extent and duration of interruptions and restriction of the supply of electricity due to accidents, emergencies through: • Establishment of an Operation and Maintenance Alliance Agreement with Transfield Worley Power Services (TWPS) for the operation and maintenance of the power station at agreed service levels which include availability and false starts of plant; • setting service level objectives and monitoring availability; • establishing emergency response plans to manage emergencies; • risk assessment and management of risk at corporate level through the CURA Governance and Risk Compliance system; • reporting at corporate level. • safety systems.	3	2. Multidiscipline risk analysis/ workshops of asset risks should be performed regularly. Risks register should be used to reflect asset and operational risks, likelihood and consequences of risks, mitigating actions, responsibilities and timing of actions.

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
			However it is noted: • There is no formal testing of emergency response plans on site; • There has been no multi discipline risk assessment of asset risks since the construction of the plant and there was no evidence of a risk register in operation during the audit; • There are mixed maintenance policies in operation but the approach is not easily determined. Policy for three main systems (turbines, generator and instrument and controls) is for scheduled maintenance. There are no regular inspections for most of the other plant.		
107	Cl 5.1	Electricity Industry Act section 41(6) A licensee must pay the costs of taking an interest in land or an easement over land	The licensee owns the land and the operator pays relevant taxes. A Certificate of Title for Lot 505 on Deposit Plan No. 39528 was sighted. There was evidence to show payment of fees, shire rates and taxes over the review period.	5	
L6	Cl 6	Transfer of Licence This licence may be transferred only in accordance with the Act.	There have not been any transfers of the licence in the audit period.	NR	
L7	Cl 7	Cancellation of Licence This licence may be cancelled only in accordance with the Act.	Not applicable (NA) in the audit period.	NR	
L8	Cl 8	Surrender of Licence This licence may be surrendered only in accordance with the Act [and as defined in the clause]	NA in the audit period.	NR	
L9	Cl 9	Renewal of Licence	NA in the audit period.	NR	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
		This licence may be renewed only in accordance with the Act.			
L10	Cl 10	Amendment of Licence on Application of the Licensee The licensee may apply to the Authority to amend the licence in accordance with the Act.	The licensee advised the Authority of a change in the company name and address on the 26 September 2012. There were no other amendments requested by the licensee in the audit period.	5	
L11	Cl 11	Amendment of Licence by the Authority the Authority may amend the licence at any time in accordance with this clause.	There was only one licence amendment in the audit period which was generated by the licensee. • 26 September 2012, corresponding to the name and registered address change of the licensee.	5	
L12 See item 119	Cl 12	Accounting Records See item 119 below	See item 119.		
119	Cl 12.1	Accounting records: Electricity Industry Act section 11 The licensee must maintain accounting records that comply with the Australian Accounting Standards Board Standards or equivalent International Accounting Standards.	The licensee has maintained accounting records which, on the basis of evidence of independent auditing firm KPMG comply with Australian Accounting Standards.	5	
120	Cl 13 Cl 13.4	Individual Performance Standards Electricity Industry Act section 11 A licensee must comply with any individual performance standards prescribed by the Authority.	NA in the audit period.	NR	
L14	Cl 14	Performance Audit see items 101, 121 below.	-		

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
101	Cl14.1	Electricity Industry Act section 13(1) A licensee must, not less than once every 24 months, provide the Authority with a performance audit conducted by an independent expert acceptable to the Authority. Cl 14.1 The licensee must, unless otherwise notified in writing by the Authority, provide the Authority with an performance audit within 24 months after the commencement date, and every 24 months thereafter.	Licence requires audit to be performed every 24 months however the Authority extended the last audit interval to 36 months as advised to the licensee on the Authority's letter of 2 August 2010.	5	
121	Cl 14.2	Electricity Industry Act section 11 A licensee must comply, and require its auditor to comply, with the Authority's standard audit guidelines dealing with the performance audit.	Licensee has requested the auditor to comply with the Authority's standard audit guidelines dealing with the performance audit. The auditor proposal and plan include statement of intent to comply with the Authority's standard audit guidelines.	5	
L15	Cl 14.3	The licensee may seek a review of any of the requirements of the Authority's standard audit guidelines in accordance with clause 19.1.	NA in the audit period.	NR	
L16	Cl 14.4	The independent auditor must be approved by the Authority prior to the audit.	The independent auditor was approved by the Authority on 12 April 2013.	5	
123	Cl 15	Reporting a Change in Circumstances Electricity Industry Act section 11 A licensee must report to the Authority, 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.	Except for the change in licensee details advised to the Authority as per item L11 above, there have been no significant change in the circumstances upon which the licence was granted which may affect a licensee's ability to meet its obligations.	5	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
L17	Cl 15.1	The licensee must report to the Authority: (a) if the licensee is under external administration (b) if the licensee experiences a change in the licensee's corporate, financial or technical circumstances upon which this licence was granted which may affect the licensee's ability to meet its obligations under this licence within 10 business days of the change occurring or (c) if the:(i-iii) licensee's name; licensee's ABN; licensee's address; (iv) description of the generating works; or (v) nameplate capacity of the generating works, change, within 10 business days of the change occurring.	There have been no changes except as noted in item 123 and L11. As per item L5: ‣ Type 2 Non-compliance for not notifying the name change from Transfield Services Kemerton PL to RATCH Australia Kemerton PL on 7 February 2012, advised to the Authority on 11 July 2012;	3	3. Recommendation as per item L5
124	Cl 16 Cl 16.1	Provision of information Electricity Industry Act section 11 A licensee must provide the Authority, in the manner prescribed, any information the Authority requires in connection with its functions under the Electricity Industry Act.	The licensee has provided the information required by the Authority in the manner prescribed except for ‣ A Type 2 Non-compliance in the late advice of name change from Transfield Services Kemerton Pty Ltd to RATCH Australia Kemerton Pty Ltd. Name change occurred on the 7 February 2012 and Authority was advised of change on the 11 July 2012. In the submission of compliance reports: • 2011-12, submitted on 22 August 2012, reporting the non-compliance noted above; • 2010-11, submitted on 24 August 2011, with no non-compliances; • 2009-10, submitted on 26 August 2010, with no non-compliances.	3	4. Recommendation as per item L5 above.
125	CL 17	Publishing information	There has been no direction from the Authority to publish	NR	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
	Cl 17.1	Electricity Industry Act section 11 A licensee must publish any information it is directed by the Authority to publish, within the timeframes specified.	information in connection with its functions under the Electricity Industry Act during the audit period.		
126	Cl 18 Cl 18.1	Notices Electricity Industry Act section 11 Unless otherwise specified, all notices must be in writing.	Notices viewed were in writing.	5	
L19	Cl 19 Cl 19.1	Review of the Authority's decisions The licensee may seek a review of a reviewable decision by the Authority pursuant to this licence.	NA in the audit period.	NR	
L20	Cl 20	Asset Management System			
102	Cl 20.1	Electricity Industry Act section 14(1)(a) A licensee must provide for an asset management system. Cl 20.1 The licensee must provide for an asset management system in respect of the licensee's assets.	The licensee has implemented an asset management system (AMS). Evidence of compliance is reviewed in section 2.4 of the report.	5	
103		Electricity Industry Act section 14(1)(b) A licensee must notify details of the asset management system and any substantial changes to it to the Authority.	Notification of the details of the asset management system were provided to the Authority prior to the start of this audit period. There were no substantial changes to the asset management system within the audit period.	NR	
L21	Cl 20.2	The licensee must notify the Authority of the details of the asset management system within 5 business days from the later of:			

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
		(a) the commencement date; and (b) the completion of construction of the generating works.			
L22	Cl 20.3	The licensee must notify the Authority of any substantial change to the asset management system within 10 business days of such change	NA. There were no substantial changes to the asset management system within the audit period.	NR	
104	Cl 20.4	Electricity Industry Act section 14(1)(c) A licensee must provide the Authority 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 Authority.	A report by an independent expert on the effectiveness of RATCH's AMS has been commissioned. The period to be covered by this report is 1 April 2010 to 31 March 2013, 36 months as per the Authority's letter of 2 August 2010.	5	
122	Cl 20.5	Electricity Industry Act section 11 A licensee must comply, and must require the licensee's expert to comply, with the relevant aspects of the Authority's standard guidelines dealing with the asset management system.	The auditor appointed by the licensee has been required to comply with the Authority's standard guidelines dealing with the AMS, as documented in the Audit Plan.	5	
L23	Cl 20.6	The licensee may seek a review of any of the requirements of the Authority's standard audit guidelines dealing with the asset management system in accordance with clause 19.1.	There has been no request by the licensee for a review of the requirements of the guidelines.	NR	
L24	Cl 20.7	The review of the asset management system must be conducted by an independent expert approved by the Authority.	The licensee has received the Authority's approval of the nominated independent expert (Authority's letter of the 12 April 2013).	5	
349	Cl 5.1	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.	NA, the licensee is not a Code participant. Under the Power Purchase Agreement (PPA) between the licensee and the network operator, the network operator is responsible for the metering installation. In addition the	NA	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
			licensee was not aware of any malfunctions or outages of the metering installation during the audit period.		
361	Cl 5.1	Electricity Industry Metering Code clause 3.16(5) A network operator or a user may require the other to negotiate and enter into a written service level agreement in respect of the matters in the metrology procedure dealt with under clause 3.16(4) of the Code.	A Power Purchase Agreement (PPA) was signed off on 26 May 2008 defining the metering arrangement between the licensee and the network operator.	5	
372	Cl 5.1	Electricity Industry Metering Code clause 3.27 A person must not install a metering installation on a network unless the person is the network operator or a registered metering installation provider for the network operator doing the type of work authorised by its registration.	The network operator has installed the metering installation.	NA	
379	Cl 5.1	Electricity Industry Metering Code clause 4.4(1) A network operator and affected Code participants must liaise together to determine the most appropriate way to resolve a discrepancy between energy data held in a metering installation and data held in the metering database.	NA, the licensee is not a Code participant. However there have been no discrepancies in the audit period. The licensee plant has a Class 2 meter on its installation at the generator terminals which is used to obtain an internal check of the power generated.	NA	
380	Cl 5.1	Electricity Industry Metering Code clause 4.5(1) A Code participant must not knowingly permit the registry to be materially inaccurate.	NA, the licensee is not a Code participant. The Licensee did not encounter any instances where the registry was noted to be materially inaccurate in terms of energy and standing data during the audit period.	NA	
381	Cl 5.1	Electricity Industry Metering Code clause 4.5(2) 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	NA in the audit period, the licensee is not a Code participant.	NR	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
		notify the network operator and provide details of the change or inaccuracy within the timeframes prescribed.			
393	Cl 5.1	Electricity Industry Metering Code clause 5.4(2) A user must, when reasonably requested by a network operator, use reasonable endeavours to assist the network operator to comply with the network operator's obligation.	Network operator has access both to site, to metering installation and to switchyard independently of licensee. The licensee did not receive applicable requests from the network operator in the audit period.	NR	
395	Cl 5.1	Electricity Industry Metering Code clause 5.5(3) A user must not impose any charge for the provision of the data under this Code unless it is permitted to do so under another enactment.	No charge was imposed in the audit period.	5	
406	Cl 5.1	Electricity Industry Metering Code clause 5.16 A user that collects or receives energy data from a metering installation must provide the network operator with the energy data (in accordance with the communication rules) within the timeframes prescribed.	NA, the network operator collects the information.	NA	
407	Cl 5.1	Electricity Industry Metering Code clause 5.17(1) A user must provide standing data and validated (and where necessary substituted or estimated) energy data to the user's customer, to which that information relates, where the user is required by an enactment or an agreement to do so for billing purposes or for the purpose of providing metering services to the customer.	NA, the network operator provides all the required meter data to the user's customer.	NA	
408	Cl 5.1	Electricity Industry Metering Code clause 5.18 A user that collects or receives information regarding a change in the energisation status of a metering point must provide the network operator with the prescribed information, including the stated	NA. The network operator has access and controls the metering installation.	NA	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
		attributes, within the timeframes prescribed.			
409	Cl 5.1	Electricity Industry Metering Code clause 5.19(1) A user must, when requested by the network operator acting in accordance with good electricity industry practice, use reasonable endeavours to collect information from customers, if any, that assists the network operator in meeting its obligations described in the Code and elsewhere.	NA. There have been no requests by the network operator during the audit period.	NA	
410	Cl 5.1	Electricity Industry Metering Code clause 5.19(2) A user must, to the extent that it is able, collect and maintain a record of the address, site and customer attributes, prescribed in relation to the site of each connection point, with which the user is associated.	NA. The connection point is with the network operator.	NA	
411	Cl 5.1	Electricity Industry Metering Code clause 5.19(3) A user must, after becoming aware of any change in a site's prescribed attributes, notify the network operator of the change within the timeframes prescribed.	NA. There have been no changes to the site's prescribed attributes. Not applicable in the audit period.	NR	
412	Cl 5.1	Electricity Industry Metering Code clause 5.19(4) A user that becomes aware that there is a sensitive load at a customer's site must immediately notify the network operator's Network Operations Control Centre of the fact.	NA to the licensee during the audit period as the customer is Verve, which is another power generator.	NR	
413	Cl 5,.1	Electricity Industry Metering Code clause 5.19(5) A network operator must give notice to a user, or (if there is a different current user) the current user, acknowledging receipt of any customer, site or address attributes from the user within the timeframes prescribed.	NA, this obligation is applicable to the network operator and not the licensee.	NA	
414	Cl 5.1	Electricity Industry Metering Code clause 5.19(6) A user must use reasonable endeavours to ensure that it does not notify the network operator of a	NA to the licensee during the audit period.	NR	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
		change in an attribute that results from the provision of standing data by the network operator to the user.			
420	Cl 5.1	Electricity Industry Metering Code clause 5.21(5) A Code participant must not request a test or audit 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.	NA during the audit period.	NR	
421	Cl 5.1	Electricity Industry Metering Code clause 5.21(6) A Code participant must not make a test or audit request that is inconsistent with any access arrangement or agreement.	NA during the audit period.	NR	
439	Cl 5.1	Electricity Industry Metering Code clause 5.27 Upon request, a current user must provide the network operator with customer attribute information that it reasonably believes are missing or incorrect within the timeframes prescribed.	NA to the licensee's business operation.	NR	
446	Cl 5.1	Electricity Industry Metering Code clause 6.1(2) A user must, in relation to a network on which it has an access contract, comply with the rules, procedures, agreements and criteria prescribed.	Except as noted elsewhere in this report, there have been no breaches of the rules, procedures, agreements and criteria in the audit period.	5	
448	Cl 5.1	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.	NA, the licensee is not a Code participant. As the plant is controlled remotely by the customer, Verve, in accordance with the PPA, Verve communicates with the network operator.	NA	
449	Cl 5.1	Electricity Industry Metering Code clause 7.2(2) A network operator must notify each Code participant of its initial contact details and of any change to its contact details at least 3 business days	NA, this obligation is applicable to the network operator and not the licensee.	NA	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
		before the change takes effect.			
450	Cl 5.1	**Electricity Industry Metering Code clause 7.2(4)** A Code participant must notify its contact details to a network operator with whom it has entered into an access contract within 3 business days after the network operator's request.	NA, the licensee is not a Code participant. This obligation is applicable to the customer, Verve, not the licensee.	NA	
451	Cl 5.1	**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 at least 3 business days before the change takes effect	NA, the licensee is not a Code participant.	NA	
452	Cl 5.1	**Electricity Industry Metering Code clause 7.5** A Code participant must 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.	NA, the licensee is not a Code participant. However there was no evidence that there have been breaches of confidentiality during the audit period. The PPA between the customer and the licensee requires the parties not to disclose "any Confidential Information".	NA	
453	Cl 5.1	**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.	NA, the licensee is not a Code participant. Confidential information is disclosed by the licensee on as required basis. This was not applicable during the audit period.	NA	
454	Cl 5.1	**Electricity Industry Metering Code clause 8.1(1)** 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 under or in connection with the Electricity Industry Metering Code by negotiations in good faith.	NA in the audit period.	NR	
455	Cl 5.1	**Electricity Industry Metering Code clause 8.1(2)** If a dispute is not resolved within 10 business days	NA in the audit period.	NR	

Item	Lic ref	Licence Conditions	Findings	Compliance* 5,4,3=Y 1,2=N	Recommendations
		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.			
456	Cl 5.1	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.	NA in the audit period.	NR	
457	Cl 5.1	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.	NA in the audit period.	NR	
458	Cl 5.1	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 of dispute resolution with as little formality and technicality and with as much expedition as the requirements of Part 8 of the Code and a proper hearing and determination of the dispute permit.	NA in the audit period.	NR	

2.4 ASSET MANAGEMENT REVIEW SUMMARY TABLE

Key findings and recommendations arising from the Asset Management System Review are listed in the following table.

LEGEND

Key	Description
▶	Finding
1. Text	Recommendations
[**OFI**]	Opportunity for Improvement

Table 8 Asset Management System Review

No.	Asset Management System Element / Criteria	Rating	Review summary (▶ Findings)	Recommendations
1	Asset Planning	Adeq & Perf	Integration of asset strategies into operational or business plans will establish a framework for existing and new assets to be effectively utilised and their service potential optimised.	
1.1	Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning.	B2	An asset management plan (AMP) was prepared in 2013 to document the operator, (TWPS) objectives, policies and strategies. The AMP objectives are consistent with meeting stakeholders' requirements which are spelt out in: • The Operations and Maintenance Alliance Agreement (OMAA) between the	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			operator and the licensee • The Power Purchase Agreement (PPA) between the licensee and the customer, Verve. Planning objectives are: • to operate in accordance with applicable law • to operate the plant according to industry practice • use condition monitoring, scheduled maintenance (on gas turbines, based on the number of starts which correspond to the Equivalent Running Hours intervals specified by the manufacturer) and run-to-fail maintenance strategy for minor plant; • meet operating performance criteria. Other constraints are: • the requirements of the PPA including conditions which will cause the default of the agreement: ◦ MCR (Maximum Continuous Rating) < 100 of NCC (Nominal Contracted Capacity) ◦ Average Availability Capacity over a 12 month period as % of gas NCC is < 96% ◦ any unit experiencing > 5 default unit trips in 12 months. There are operational incentives for efficiency such as: • bonus payments for generation efficiency, ie. using less fuel than provided under the PPA. The annual budget is presented in November together with the annual AMP, including O&M and Capital Works expenditure. Plans are driven by the customer, Verve, providing the expected annual load demand a year ahead,. Plans are adjusted by the operator, TWPS based on historical operational data. Budgets are prepared and presented to the licensee at the end of the calendar year.	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			The operator plans ahead plant inspections and overhauls based on number of plant starts. At present there is no written procedure for the planning process however the process is documented through reports and plans at selected planning stages.	
1.2	Service levels are defined.	A1	Service levels for the plant are provided by the PPA which defines conditions for default of the contract with the customer (was Western Power, now Verve): • MCR (Maximum Continuous Rating) < 100 of NCC (Nominal Contracted Capacity) • Average Availability Capacity over a 12 month period as % of gas NCC is < 96% • any unit experiencing > 5 default unit trips in 12 months. There are incentives for operating efficiently where savings in fuel consumption (where the actual performance results in higher efficiency than defined under the PPA Heat Rate) result in additional revenue, as well as incentives related to the number of starts.	
1.3	Non-asset options (e.g. demand management) are considered.	NR	Not applicable to this operation. The operation relies on supplying maximum contracted power and dispatching power on demand from the customer. The assets are geared to supply as much power as the customer demands within the plant capacity, therefore there is no demand management as such. There is a strategy to use liquid fuel where selected, to keep the liquid fuel plant operational and take advantage of better fuel returns.	
1.4	Lifecycle costs of owning and operating assets are assessed. (also at 2.2).	A1	A Lifecycle model, covering the years 2005 to 2030, had been prepared by the licensee to assess the plant feasibility over its life. This model has been kept current and includes the changes that have occurred in the plant since inception. The model is now at version 6 and it incorporates capital expenditure like the Wet Compression Improvement project completed in 2008. The model allows the pass-through of costs like the carbon tax.	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
1.5	Funding options are evaluated.	A1	The plant business model is based on the capacity revenue paid by the client, Verve, for the PPA duration of 25 year. This revenue is based on the plant generation capacity and is indexed by a portion of CPI. The plant expansion in 2008 resulted in an increase in Capacity Payments of just under 7%. Other significant sources of funds are: • a Liquid Fuel Payment for liquid fuel used, where revenue is generated by the plant supplying power at higher efficiency, (or lower heat rate) than scheduled; • a Gas Banking Account (when, as noted in section 1.2 above, the actual operating efficiency is better than the PPA specified Heat Rate); • the Variable Operating and Maintenance (VOM) revenue, which covers the operating and maintenance expenses and is based on Equivalent Operating Hours (EOH) of the plant; • A Start-Up payment for plant starts, to cover start and synchronisation costs. Sources of funding are reported in annual RATCH and TWPS reports which have been reviewed during the review period.	
1.6	Costs are justified and cost drivers identified.	A1	Cost drivers are identified in regular reports and are subject to review: Annual Operating Reports, (e.g. RATCH "Annual Operating Report 2012") indicate that the main cost drivers are operating and maintenance, insurance, imported electricity, corporate expenses, owner costs and unscheduled repairs.	
1.7	Likelihood and consequences of asset failure are predicted.	C2	Asset failures are reviewed on a case by case basis and as discussed in the commentary of the AMP. ▸ There is not a formalised systematic approach for determining likelihood and consequences of failures, severity of risks, actions and timing.	1. See item 8.2 for recommendation.
1.8	Plans are regularly reviewed and updated.	A1	The AMP is reviewed and reissued annually (around November). The AMP includes an overview of the condition of all the major items of plant and the strategies to be adopted for the effective operation of the plant.	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			Cost plans and operational performance are subject to continuous review. Budgets are also presented in November for adoption in the following year.	
2	Asset Creation and acquisition		A more economic, efficient and cost-effective asset acquisition framework which will reduce demand for new assets, lower service costs and improve service delivery.	
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions.	B2	The AMP set the annual scene for plant acquisition and creation. New projects were previously evaluated using the "Business Case for Capital or Project Expenditure" documentation. This has now been replaced by the "Project Approval Form" by TWPS. An example of new project approval was the application for the "Thermal Barrier Coating to Second Stage", project number 005_2013. The project was described by the operator, TWPS, with reasons for the change and submitted to the licensee for approval. In the example viewed there was no scope for assessment of non-asset solutions. Apart from improvement work on existing assets no major new assets were required in the review period.	
2.2	Evaluations include all life-cycle costs.	B2	Life cycle costs have been identified for the plant in the Lifecycle model which covers the years 2005 to 2030. There were no purchases of new assets during the review period except for the purchase of a new workshop shed.	
2.3	Projects reflect sound engineering and business decisions.	B2	The AMP outlines the range of work and projects that will be required in the forthcoming period. Commentary is provided in the AMP to describe the conditions or the assets and the need for any new projects. The "Thermal Barrier Coating to Second Stage" project sighted was based on sound engineering and business decisions.	
2.4	Commissioning tests are documented and completed.	A1	Commissioning tests records are available relating to the plant construction, previous projects and maintenance work.	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
2.5	Ongoing legal/environmental/safety obligations of the asset owner are assigned and understood.	B2	There is a new process for managing the legal/environmental/safety compliance of the asset operation which is managed by RATCH through their compliance group. RATCH follows up through the "RATCH Australia - Licence and Permit Register" the actions required for compliance with the various obligations. The register was tested and actions were found to comply. In addition to the above register there are local registers, including the "Plant Registered Equipment" list for compliance with plant registration for safety compliance. Previously there were a number of number of non-compliances against obligations which are reviewed at item 4.3.	
3	Asset Disposal		Effective management of the disposal process will minimise holdings of surplus and under-performing assets and will lower service costs.	
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process.	B1	Asset performance is reviewed regularly, performance is reported in monthly, quarterly and annual reports. In the annual issue of the AMP assets are reviewed and their operating performance analysed. At present there is a decommissioning plan for the plant for 2030, however application of this plan will depend on the conditions of the plant and on commercial arrangements.	
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken.	B1	Monthly, quarterly and annual reports identify plant performance and history of any plant issues. Availability and false starts are two of the main performance indicators that are monitored in the reports. The annual AMP also reports on plant issues. There are six monthly tests for verification of compliance with Maximum Continuous Rating (MCR) requirements.	
3.3	Disposal alternatives are evaluated.	NA	At this stage of the operation there has been no evident requirement for disposal of assets.	
3.4	There is a replacement strategy for assets.	A1	The assets have been designed to run for 25 years, and at present the fall back	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			strategy is to return the site to its original conditions.	
4	Environmental Analysis		The asset management system regularly assesses external opportunities and threats and takes corrective action to maintain requirements.	
4.1	Opportunities and threats in the system environment are assessed.	B2	The AMP identifies threats to the plant operation on an annual basis in a commentary on the main assets. The regular monthly, quarterly and annual reports also identify any issues with the performance of the plant. The AMP deals with the conditions of the major assets and possible failures, however as there are no inspections on some of the plant which are subject to "Run to Failure" maintenance regime, there are residual risks in their operation. In addition no overall asset risk register was sighted which also adds to the lack of transparency of asset risks. The AMP review has identified threats such as the operation of the Wet Compression system which, with the introduction of water into the intake results in higher blade and vane wear, at this stage confined to the surfaces protective coatings.	
4.2	Performance standards (availability of service, capacity, continuity, emergency response, etc) are measured and achieved.	A2	There is strong commitment to the reporting of performance standards in monthly reports. Achievement of performance standards are linked to financial incentives as noted in sections 1.1 and 1.2. Monthly reports for the review period were viewed, It was noted that whilst there were monthly dips in the performance standards, due to external factors such as storm creating an outage of the 22 kV line, or a number of false starts in 2010 due to possible communication errors in control modules, the overall annual performance was in accordance with the client requirements.	
4.3	Compliance with statutory and regulatory requirements.	B2	Compliance with statutory and regulatory requirements is maintained through a compliance spreadsheet, the "RATCH Australia - Licence and Permit Register", which is used by the licensee to prompt the operator for action on each obligations. The prompts are based on the dates indicated in the register. There are a number of reports and registers documenting compliance with requirements:	2. Monitor the performance of the Licence and Permit Register and the effectiveness of the process to address the non-compliance against licence obligations.

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			• Viewed "Annual Monitoring Report for 2010" (for environmental compliance, issued in January 2011); • "Annual Audit Report" presented by the operator for approval by the licensee; • "Annual Compliance Report for the Year 1 November 2011 to 31 October 2012, issued 23 January 2013 • Plant Registered Equipment list. ▸ There were non-compliances during the review period: ▫ Lack of advice of name change from Transfield Services Kemerton Pty Ltd to RATCH Australia Kemerton Pty Ltd of 7 February 2012, advised to the Authority on 11 July 2012 (type 2 non-compliance); ▫ Missing timely submission of annual "Environmental Ministerial Compliance Report for the period 2011-12" , as noted in report for 2013. The review noted that similar non-compliances occurred in the 2008 AMS Review. It is also noted that, since the non-compliances, the system has been changed to a Licence Compliance Register which is being monitored by RATCH.	
4.4	Achievement of customer service levels. • Review achievement of service standards over the audit period	B2	The station has been operated mainly for short operational periods or in compliance tests, either for emission or for compliance with MCR requirements in the PPA or IMO. In each case the power station has complied with its service levels. Overall the monthly reports show compliance with customer service levels except for isolated failure to start (2 off) in 2010 and loss of availability over short periods.	
5	**Asset Operations**		Operations plans adequately document the processes and knowledge of staff in the operation of assets so that service levels can be consistently achieved.	
5.1	Operational policies and procedures are documented and linked to service levels required.	B2	The AMP documents the policies applied to the plant which reflect the operational requirements and the required service levels. As the plant is operated on short operational shifts it is subject to a heavier operating regime than a base load station. The client has in the past requested the plant to	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			operate at higher frequency than originally planned. The current trend is for the number of starts to decrease, however at this point, the figure is still higher than planned. Due to the demanding operating regime the AMP focuses on minor and major inspections of the Gas Turbines. Manufacturer's Operation and Maintenance Manuals are available to support maintenance. Under the PPA the client provides the annual power demand requirements to the licensee who then adjusts the requirements to better reflect operational history. The plant is routinely operated remotely by the client, or locally by the operator, under request from the client.	
5.2	Risk management is applied to prioritise operations tasks.	B2	The AMP includes a "Criticality Analysis", documented in the "Routine Maintenance & Administration" register which includes simple risk ratings. The "Criticality Analysis" lists six main operational / maintenance issues rated either as medium or low risk. Medium risks are attributed to: • Coating loss on first 6 rows of the compressor; • Wear on transition ring of CC mixing chamber; • Cracks in exhaust gas diffuser.	
5.3	Assets are documented in an Asset Register including asset type, location, material, plans of components, and an assessment of assets physical/structural condition and accounting data.	C2	A SAP asset management system is in place; the system stores the asset details in accordance with the KKS plant classification. The system contains some asset information, however it is primarily used for setting up Purchase Orders and billing information and it was not evident that plant history could be tracked through the system. ▸ The operator asset register is not used to its full functionality and should contain more information on assets, such as an assessment of assets physical/structural condition and job data. A separate spreadsheet based system records asset accounting data.	3. The asset register functionality should be further utilised to store information on the asset conditions and job history.
5.4	Operational costs are measured and monitored.	B2	AMP 2013 identifies in the "Criticality Analysis" six "Routine Maintenance & Administration" tasks with a relatively low total expenditure. Of these the largest is the "Wear on the transition ring of the combustion chamber mixing chamber" which is a provision for repair works which will depend upon the condition of the equipment	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			found during the HGP Inspection due during the period. However this expenditure is not individually identified in any of the reporting plans. O&M costs are identified as part of the OMAA agreement between the licensee and the operator and are tracked as part of the OMAA financial arrangement.	
5.5	Staff receive training commensurate with their responsibilities.	B3	An operator training and certification program is maintained for each individual Operations and Maintenance Technician. A Training Matrix is used by the operator to identify staff training. It was noted that Operator's staff have received initial training. ▸ Inspection of the Training Matrix showed that Operator's staff had received satisfactory initial training however: ▫ staff first aid training is lapsed ▫ confined space training has also lapsed.	4. A review is required to determine what training is required to maintain competency. Lapsed training should be performed to maintain currency.
6	**Asset Maintenance**		Maintenance plans cover the scheduling and resourcing of the maintenance tasks so that work can be done on time and on cost.	
6.1	Maintenance policies and procedures are documented and linked to service levels required.	B2	Maintenance policies had been set on the basis of the contractor providing the operation and maintenance services on site and responding to the operating regime demanded by the client's service level. The contractor is TWPS who is the operator under an "Operation & Maintenance Alliance Agreement" (OMAA). ▸ Maintenance policies are outlined in the AMP and defined for major items of plant however they are not clearly defined for the remainder of plant. The AMP includes a high level maintenance schedule for the main plant (refer to 6.2 for further observations). Maintenance is focused on maintaining availability. Oil sampling and analysis is conducted every 6 months on turbine lubrication and hydraulic oil. Transformers Oil samples are also analysed every 12 months. Vibration monitoring is performed every 6 months "at each accessible bearing position" however the AMP does not clearly define which plant is subject to vibration monitoring.	5. There should be a maintenance schedule showing the maintenance regime applied to the plant systems and clarifying the maintenance policies.
6.2	Regular inspections are undertaken of asset	B2	Selected plant is subjected to regular inspections. Maintenance policies are outlined in the AMP however they are not clearly defined for the plant except for the main	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
	performance and condition.		items of plant such as: • the gas turbines which are subject to ◦ minor and major (HGP) inspections at 250 and 1250 starts, ◦ lifetime extension inspections at 3000 starts and ◦ major inspections at 41000 Equivalent Hours (EH) which correspond to approximately 1250 starts; ◦ The next outage for GT2 has been planned for the 1400 starts operating time in October 2013, with the next major inspection due at 2500 starts in a further 10 years (Oct 2023), which assumes a decrease in the rate of use of the units; • Instrument & Control which inspections are aligned with the GTs minor and major inspections • Generator which is subject to minor and major inspections. Management advised that there are no inspection of miscellaneous plant which is run-to-failure. Records for major inspections of Gas Turbine 12 (U12), carried out between 15 October and 26 November 2012 were viewed.	
6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule.	C3	Maintenance plans for major plant are reported and scheduled in the AMP and regular reports. No tasks are reported in the asset management system SAP. Some of the inspection and maintenance, those related to safety compliance, is recorded in a manual paper system. Most of the inspections are reliant on personnel to manually select and schedule operational tasks. ▸ There is no transparent means to indicate which plant should be subject to inspection and which has been inspected and no clear indication of the performance of miscellaneous plant, nor of history of such plant. Whilst partly due to the policy of run-to-failure of miscellaneous plant there is a concern that the system relies on manual intervention with no documented scheduling. The only documentary information could be the commentary in the AMP or the monthly reports.	6. Recommendation at item 6.1.

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
6.4	Failures are analysed and operational/maintenance plans adjusted where necessary.	B2	Failures are investigated and, where applicable corrective actions result in changes in the O&M strategies. A Generator failure occurred in April 2011 on the unit 12 generator due to an inherent design fault, resulting in a six week outage of the unit to repair the damage. The failure was investigated in report "KPS Unit 11 Generator Rotor Pole Cross-over Modification Report", July 2012. This resulted in an outage being scheduled on 4 to 18 June 2012 to perform modifications to the unit 11 generator which was suffering the same condition. The outage was completed on the 16 June 2012, two days ahead of plan. ▸ The review noted that as the work and task data is not entered into or linked to the Asset management System there is no historical view of the asset performance.	7. [OFI] Consider the revision and updating of the failure recording system to systematically track the details of each event, including identification of plant, causes, documentation, actions, dates. This will enable a historical record of the asset performance.
6.5	Risk management is applied to prioritise maintenance tasks.	B2	The AMP showed that there was a prioritisation of operational and maintenance task by allocating a risk rating to the issues identified in the AMP "Criticality Analysis". Risk prioritisation is applied on a case by case basis, for example the "HDMI Upgrade" computer upgrade notices the risk posed by age of the site computer assets. The business case employs Risk and Opportunity Matrices to list the risks and benefits of the case.	
6.6	Maintenance costs are measured and monitored.	A2	O&M costs are identified as part of the OMAA agreement between the licensee and the operator and are tracked as part of the OMAA financial arrangement.	
7	Asset Management Information system (MIS)		The asset management information system provides authorised, complete and accurate information for the day-to-date running of the asset management system. The focus of the review is the accuracy of performance information used by the licensee to monitor and report on service standards.	
7.1	Adequate system documentation for users and IT operators.	B2	O&M manuals are available in paper form. SAP use is limited to one operational staff and is not used for work management.	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			There are paper systems for safety compliance. Performance information is obtained from plant data logging (Teleperm) and is used to generate monthly, quarterly and yearly reports which are required by the OMAA, the operation agreement between the licensee and the operator.	
7.2	Input controls include appropriate verification and validation of data entered into the system.	B2	Data is provided by Teleperm on a continual basis, the data files are manually checked daily and monthly and sent to Sydney office monthly for entry into SAP and billing. Data captured from SCADA is cross checked to TWPS bills. The operation is supported by procedures: • "KPS Billing System", "Input Data Specification", September 2005; • "KPS Billing System", "Data Transfer Protocol", December 2005 for creation of Teleperm file; • "KPS Billing System", "Calculation Specification", February 2006 for SAP calculation of data.	
7.3	Logical security access controls appear adequate, such as passwords.	A1	Access to the asset management system appears adequate. Access control is provided by user and password control, Policy includes password changes every three months and minimum length passwords with character requirements.	
7.4	Physical security access controls appear adequate.	A2	Site is secured by electric fence and security cameras. Two fences secure the entrance. The site office housing access to the site system servers is locked when unattended. Only three staff attend the site Monday to Friday during business hours.	
7.5	Data backup procedures appear adequate.	B2	The review has viewed communication with the Information Technology staff that states that Kemerton Power Station (KPS) data is backed up to Sydney office nightly. the Sydney office has off site backups and would be operational within hours in a disaster recovery situation. The KPS local data would require a restore from Sydney in case of local data loss. ▸ There are also local back ups however there no supporting procedural	8. Operation of back up system should be documented including off site and local operation.

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			documentation was sighted. TWPS have prepared a business case for the upgrade of local computer systems in view of the fact that these systems are reaching the end of their reliable operating life (see item 6.5 above for review).	
7.6	Key computations related to licensee performance reporting are materially accurate.	B1	Procedures noted at item 7.2 support data handling and calculation. The repetitive nature of the calculations and outputs allows verification of month-on-month and year-on-year variations and the identification of any inaccuracies.	
7.7	Management reports appear adequate for the licensee to monitor licence obligations.	B1	Monthly, quarterly and annual reports provide a range of operational parameters which monitor the licensee compliance with client requirements. In addition to performance compliance the Licence register allows monitoring of compliance of licence obligations.	
8	Risk Management		An effective risk management framework is applied to manage risks related to the maintenance of service standards.	
8.1	Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system.	B2	The assets received a risk analysis during design/construction, the resulting actions were followed up in the following period. At present there is not a register identifying operational risks of every asset. No procedures are being distinctly implemented. As reviewed at item 6.5 risks are reviewed on a case by case basis to support the project approval case.	
8.2	Risks are documented in a risk register and treatment plans are actioned and monitored.	C2	At present there is not a register identifying operational risks of every asset. Limited lists are provided in the AMP for planned O&M projects. At the same time there is a commentary which discussed the assets operation and issues. A CURA system is also available to manage "Governance and Risk Compliance", it primarily addresses safety issues and did not appear to be actively used on site. ▸ There is no overall register systematically and regularly assessing operational risks of significant asset.	9. An overall risk register should be in operation showing regular (eg. annual) risk assessment for all significant assets systems and assets, and identifying likelihood and consequences of risks, actions required for risk mitigation, responsibilities and timing of actions.
8.3	The probability and consequences of asset failure are	C2	There is a review of asset performance and expected operational issues in the	10. Recommendation as per item 8.2.

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
	regularly assessed.		annual AMP. Individual issues are analysed on a case by case basis where the issue may be significant. ▸ Whilst there is reporting on possibility of failure there is no systematic assessment of probability and consequences of asset failure.	
9	Contingency Planning		Contingency plans have been developed and tested to minimise any significant disruptions to service standards	
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.	B3	There is an "Emergency Response Plan" to deal with injury management, fire, explosion, chemical and oil spills, incidents at height or in confined spaces. Fall back position is to call local emergency services on 000. ▸ No evidence was available that the plans are tested. ▸ Some of the plans entail that the staff to be tested for response to incidents in confined spaces or where injuries occur, however formal training for these responses has been allowed to lapse.	11. Implement contingency plans and test to confirm their application. 12. Recommendation on training is as per item 5.5.
10	Financial Planning		A financial plan that is reliable and provides for the long-term financial viability of the services.	
10.1	The financial plan states the financial objectives and strategies and actions to achieve the objectives.	B2	The plant business model is based on capacity revenue and other revenues paid by the client Verve, for the PPA duration of 25 year. The primary revenue stream is based on the plant generating capacity and is indexed by a portion of CPI. There is an overall financial plan, the Lifecycle model, covering the years 2005 to 2030, which had been prepared by the licensee to assess the plant feasibility over its life and has been kept current. This model includes the changes that have occurred in the plant since inception and includes both operating and capital costs. "RATCH Budget Presentation for 2013" shows summary of costs and revenue, sources of funds and costs. Strategies are outlined in the RATCH Budget Presentation and in the AMP.	
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs.	B2	Sources of funds are identified in the annual RATCH Budget Presentation in terms of: • Capacity charges	

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			• VOM covering the operating and maintenance expenses • Start up costs • Liquid fuel charges • Gas Banking Account. Capital works are supported by business cases. The overall financial plan, the Lifecycle model, covering the years 2005 to 2030, includes both operating and capital costs over the 25 years.	
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets).	B2	The overall financial plan, the Lifecycle model, covering the years 2005 to 2030, includes revenue, operating and capital costs over the 25 years.	
10.4	The financial plan provides firm predictions on income for the next five years and reasonable indicative predictions beyond this period.	A1	The overall financial plan, the Lifecycle model, covering the years 2005 to 2030, includes forecasts of revenue over the 25 years.	
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services.	B2	The overall financial plan, the Lifecycle model, covering the years 2005 to 2030, includes forecasts of operating and capital costs over the 25 years. Operating costs include all costs incurred for O&M and administration.	
10.6	Significant variances in actual/budget income and expenses are identified and corrective action taken where necessary.	A1	Variances are identified and explained in Quarterly and Annual Operating Reports.	
11	**Capital Expenditure Planning**		A capital expenditure plan that provides reliable forward estimates of capital expenditure and asset disposal income, supported by documentation of the reasons for the decisions and evaluation of alternatives and options.	
11.1	There is a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities	B2	AMP 2013 (section 1.2) referred to a Capital Expenditure Plan (CAPEX) in Appendix B, the CAPEX did not show any allocation for the period or any other details in the	13. Short term CAPEX should clearly identify allocation to individual

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
	and dates.		referenced section. ▸ Other CAPEX sighted did not identify individual expenditure projects, rather it lumped costs into single entries which makes it difficult to identify which projects have been completed or their financial progress in the period.	projects.
11.2	The plan provides reasons for capital expenditure and timing of expenditure.	B2	Capital expenditure costs allocations are identified in the commentary within the "Highlights" section of the Annual Operating report. Reasons are provided in the individual business cases. The AMP provides commentary and strategies for the works and it includes year ahead budgets for capital works in terms of Major Outages Costs, Capital Purchases & Projects, Overheads & Margin on Costs. ▸ The financial plans do not identify individual capital works as line entries but lump the costs into single entries.	14. Recommendation as per item 11.1.
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan.	B2	The financial documents capital expenditure information is consistent with the asset life and condition.	
11.4	There is an adequate process to ensure that the capital expenditure plan is regularly updated and actioned.	B2	Reports and AMP are reviewed and re-issued annually.	
12	Review of AMS		Review of the Asset Management System to ensure the effectiveness of the integration of its components and their currency.	
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	The AMP is internally reviewed annually. ▸ There is reference to a management review process in the AMP however the referenced section is not included in the AMP.	15. [OFI] Correct AMP to include missing section.
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system.	B2	TWPS internal Operations Systems Plan (OSP) audit is held annually, last held in December 2012.	16. Refer to recommendation identified at item 5.5.

No.	Asset Management System Element / Criteria	Rating	Review summary (▸ Findings)	Recommendations
			▸ Major non conformities found in internal audit were lack of training in safety: ▫ lack of refresher courses in HSE training such as confined spaces, working at heights etc External reviews are carried out as part of the electricity licence obligations for asset management system review.	

3 CHANGES TO THE LICENCE

No changes to the licence conditions are recommended.

4 POST AUDIT IMPLEMENTATION PLAN

The Post Audit and Review Implementation Plan (PAIP) is a document prepared by the licensee in response to the recommendations made in the review. As it represents the licensee's views and actions it does not form part of the audit report, however it has been included in Appendix A in order to complete the documentation of the report.

Each key review finding and recommendation has been listed in the PAIP by the auditor. For each recommendation the licensee has recorded responses and corrective actions, responsibility for the actions and a proposed date for completion.

Appendix A - Post Audit and Post Review Implementation Plans

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POST AUDIT IMPLEMENTATION PLAN

PERFORMANCE AUDIT							
No	Cl	Licence Requirement / Rating	Finding	Recommendation	Action	By Whom	Date
L5	Cl.5	Compliance: The licensee must comply with all applicable legislation. Rating: 3	• Type 2 Non-compliance for not notifying the name change from Transfield Services Kemerton PL to RATCH Australia Kemerton PL on 7 February 2012, advised to the Authority on 11 July 2012; • Environmental reports: Missing timely submission of annual "Environmental Ministerial Compliance Report for the period 2011-12", as noted in report for 2013. A corrective action is in place. The process has been revised with RATCH prompting and following up on compliance due date.	17. A corrective action is in place. The process has been revised with RATCH prompting and following up on compliance due dates. Monitor the performance of the new compliance system for its effectiveness. Continue with the implementation of corrective actions to address the non-compliance against licence obligations.	The ownership of the Licence and Permit register is now assigned to RATCH- Australia corporate (RAC) legal department. Circulation of the register is performed at beginning of each month to site level, station manager then responsible for submission of licenses/permits to the relevant departments, once RAC has conducted a review where necessary. Monitoring the performance of compliance system effectiveness, a review of the Licence and Permit register to be an agenda item of the Asset Management Meeting, held every month.	Steve Clark, Operations Manager for RATCH assets	July 31st 2013
106	Cl 5.1	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. Rating: 3	• There is no formal testing of emergency response plans on site; • There has been no multi discipline risk assessment of asset risks since the construction of the plant and there was no evidence of a risk register in operation during the audit; • There are mixed maintenance policies in operation but the approach is not easily determined. Policy for three main systems (turbines, generator and	18. Multidiscipline risk analysis/ workshops of asset risks should be performed regularly. Risks register should be used to reflect asset and operational risks, likelihood and consequences of risks, mitigating actions, responsibilities and timing of actions.	Annual asset risk analysis review to be performed annually. This requirement and outcomes to be documented is the annual Asset Management Plan for the station.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013

PERFORMANCE AUDIT							
No	Cl	Licence Requirement / Rating	Finding	Recommendation	Action	By Whom	Date
			instrument and controls) is for scheduled maintenance. There are no regular inspections for most of the other plant.				
L17	Cl 15.1	The licensee must report to the Authority: (c) if the:(i-iii) licensee's name; licensee's ABN; licensee's address; change, within 10 business days of the change occurring. Rating: 3	▸ A Type 2 Non-compliance in the late advice of name change from Transfield Services Kemerton Pty Ltd to RATCH Australia Kemerton Pty Ltd. Name change occurred on the 7 February 2012 and Authority was advised of change on the 11 July 2012.	19. Recommendation as per item L5 above.	Action as per item L5 above	Steve Clark, Operations Manager for RATCH assets	July 31st 2013
124	Cl 16, 16.1	Provision of information Electricity Industry Act section 11 A licensee must provide the Authority, in the manner prescribed, any information the Authority requires in connection with its functions under the Electricity Industry Act. Rating: 3	▸ The licensee has provided the information required by the Authority in the manner prescribed however there has been one non-compliance relating to the submission of a compliance report two weeks after the required date for the period 1 July 2011 to 30 June 2012. The non-compliance has been noted under item 4.3 of the Asset Management System Review and recommendations have been noted in that section.	20. Recommendation as per item L5 above	Action as per item L5 above	Steve Clark, Operations Manager for RATCH assets	July 31st 2013

POST REVIEW IMPLEMENTATION PLAN

ASSET MANAGEMENT REVIEW							
Item No	EC Ref	AMS Element Effectiveness Criteria / Rating	Finding	Recommendation	Action	By Whom	Date
	1	Asset Planning					
	1.7	Likelihood and consequences of asset failure are predicted. Rating: C2	• There is not a formalised systematic approach for determining likelihood and consequences of failures, severity of risks, actions and timing.	21. Recommendation recorded under EC Ref. 8.2, recommendation 9.	Annual asset risk analysis review to be performed annually. This requirement and outcomes to be documented is the annual Asset Management Plan for the station.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
2	4.3	Compliance with statutory and regulatory requirements. Rating: B2	• There were non-compliances during the review period: ▫ Lack of advice of name change from Transfield Services Kemerton Pty Ltd to RATCH Australia Kemerton Pty Ltd of 7 February 2012, advised to the Authority on 11 July 2012 (type 2 non-compliance); • Missing timely submission of annual "Environmental Ministerial Compliance Report for the period 2011-12", as noted in report for 2013. The review noted that similar non-compliances occurred in the 2008 AMS Review. It is also noted that, since the non-compliances, the system has been changed to a Licence Compliance Register which is being monitored by RATCH.	22. Monitor the performance of the Licence Compliance Register and the effectiveness of the process to address the non-compliance against licence obligations.	Monitoring the performance of compliance system effectiveness, a review of the Licence and Permit register to be an agenda item of the Asset Management Meeting, held every month.	Steve Clark, Operations Manager for RATCH assets	July 31st 2013

ASSET MANAGEMENT REVIEW							
Item No	EC Ref	AMS Element Effectiveness Criteria / Rating	Finding	Recommendation	Action	By Whom	Date
3	5.3	Assets are documented in an Asset Register including asset type, location, material, plans of components, and an assessment of assets physical/structural condition and accounting data. Rating: C2	• The operator asset register is not used to its full functionality and should contain more information on assets, such as an assessment of assets physical/structural condition and job data.	23. The asset register functionality should be further utilised to store information on the asset conditions and job history.	The computerised SAP module forms the asset register function. Additional data to be loaded into SAP to reflect prior history and in addition future works that are performed will be entered on completion of works.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
4	5.5	Staff receive training commensurate with their responsibilities. Rating: B3	• Inspection of the Training Matrix showed that Operator's staff had received satisfactory initial training however: ▫ staff first aid training is lapsed ▫ confined space training has also lapsed.	24. A review is required to determine what training is required to maintain competency. Lapsed training should be performed to maintain currency.	Annual review of training matrix to determine expiry of any site competency and skills. Such review to be added and documented in annual Asset Management Plan review.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
5	6.1	Maintenance policies and procedures are documented and linked to service levels required. Rating: B2	• Maintenance policies are outlined in the AMP and defined for major items of plant however they are not clearly defined for the remainder of plant.	25. There should be a maintenance schedule showing the maintenance regime applied to the plant systems and clarifying the maintenance policies.	A review to be conducted of present maintenance schedules for 'plant of plant', document the findings and maintenance polices within Asset Management Plan.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
6	6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule. Rating: C3	• There is no transparent means to indicate which plant should be subject to inspection and which has been inspected and no clear indication of the performance of miscellaneous plant, nor of history of such plant. Whilst partly due to the policy of run-to-failure of miscellaneous plant there is a concern that the system relies on manual intervention with no documented scheduling. The only	26. Recommendation as per EC 6.1.	A review to be conducted of present maintenance schedules for 'plant of plant', document the findings and maintenance polices within Asset Management Plan.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013

ASSET MANAGEMENT REVIEW							
Item No	EC Ref	AMS Element Effectiveness Criteria / Rating	Finding	Recommendation	Action	By Whom	Date
			documentary information could be the commentary in the AMP or the monthly reports.				
7	6.4	Failures are analysed and operational/maintenance plans adjusted where necessary. Rating: B2	• The review noted that as the work and task data is not entered into or linked to the Asset management System there is no historical view of the asset performance.	27. [OFI] Consider the revision and updating of the failure recording system to systematically track the details of each event, including identification of plant, causes, documentation, actions, dates. This will enable a historical record of the asset performance.	A register will be developed that lists any prior plant failures. Register to list details of events and comments on where findings and supporting information can be found. Register to be referenced in site Asset Management Plan.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
8	7.5	Data backup procedures appear adequate. Rating: B2	• There are off site and local back ups processes however there no supporting procedural documentation was sighted.	28. Operation of back up system should be documented including off site and local operation.	Contact to be made with corporate IT to determine process and procedure behind current IT back-up systems.	Wayne Roberts, Station Manager for Kemerton Power Station.	30th August 2013
9	8.2	Risks are documented in a risk register and treatment plans are actioned and monitored. Rating: C2	• There is no overall register systematically and regularly assessing operational risks of significant asset.	29. An overall risk register should be in operation showing regular (eg. annual) risk assessment for all significant assets systems and assets, and identifying likelihood and consequences of risks, actions required for risk mitigation, responsibilities and timing of actions.	A risk register will be developed, will be linked to annual asset risk analysis review.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
10	8.3	The probability and consequences of asset failure are regularly assessed. Rating: C2	• Whilst there is reporting on possibility of failure there is no systematic assessment of probability and consequences of asset failure.	30. Recommendation as per EC 8.2.	A risk register will be developed, will be linked to annual asset risk analysis review.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
11 12	9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.	• No evidence was available that the plans are tested. • Some of the Emergency	31. Implement contingency plans and test to confirm their application.	Emergency response plan testing to be added as an agenda item to site monthly Management / Toolbox meeting.	Wayne Roberts, Station Manager for Kemerton Power Station.	July 31st 2013

ASSET MANAGEMENT REVIEW							
Item No	EC Ref	AMS Element Effectiveness Criteria / Rating	Finding	Recommendation	Action	By Whom	Date
		Rating: B3	Response Plans entail the staff to be tested for response to incidents in confined spaces or where injuries occur, however formal training for these responses has been allowed to lapse.	32. Recommendation on training is as per EC 5.5.	Action as per item EC 5.5 above.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
13	11.1	There is a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates. Rating: B2	▸ Other CAPEX sighted did not identify individual expenditure projects, rather it lumped costs into single entries which makes it difficult to identify which projects have been completed or their financial progress in the period.	33. Short term CAPEX should clearly identify allocation to individual projects.	Review of monthly P&L spread sheets to improve articulation on CAPEX expenditure.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
14	11.2	The plan provides reasons for capital expenditure and timing of expenditure. Rating: B2	▸ The financial plans do not identify individual capital works as line entries but lump the costs into single entries.	34. Recommendation as per EC 11.1.	Review of monthly P&L spread sheets to improve articulation on CAPEX expenditure.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
15	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.	▸ There is reference to a management review process in the AMP however the referenced section is not included in the AMP.	35. [OFI] Correct AMP to include missing section.	Update Asset Management Plan to cover management review process.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013
16	12.2	Independent reviews (e.g. internal audit) are performed of the asset management system.	▸ Major non conformities found in internal audit were lack of training in safety: ▫ lack of refresher courses in HSE training such as confined spaces, working at heights etc	36. Refer to recommendation identified at EC 5.5.	Action as per item EC 5.5 above.	Wayne Roberts, Station Manager for Kemerton Power Station.	2nd December 2013

Appendix B - Documentation reviewed

Documentation reviewed

Licence compliance

1. Correspondence with the Authority
2. Tax invoices from the Authority
3. 2010 Performance Audit and Asset management Review for Transfield Services
4. RATCH Australia Licence and Permits Register
5. Kemerton Power Station Compliance and Licences

Operation

6. TWPS Asset Management Plan
7. Correspondence with the Authority
8. Power station monthly and quarterly reports
9. Annual Operating Report - 2012
10. Operation and Maintenance Alliance Agreement
11. Asset Site Agreement
12. Letter Transfield Services Kemerton PL Supporting information on PPA
13. Outline of PPA and conditions of agreement
14. Power Purchase Agreement 8 Dec 2003
15. Business Case for Capital or Project Expemditure
16. Project Approval Application of Thermal Coating to the 2nd Stage Turbine Hardware (Blades and Vanes) 005_2013
17. Project Approval Application HDMI Upgrade
18. Teleperm daily datasheet
19. Kemerton Power Station Unit 11 Generator - Rotor Pole Cross-over Modification Report
20. Inspection Report U12 Major Overhaul Oct 2012
21. Report Energy Production, Contracted Capacity, Revenue, Expenses and

Cashflow Summary 2012 - 2031

22. Annual Monitoring Report 4/1/11 for 2010
23. Annual Audit Report
24. Annual Compliance Report 1 November 2011-31 October 2012
25. Environmental Ministerial Compliance Report - 2013

AMIS

26. KPS Functional Plant List
27. Email Kemerton Data Backup 18 Feb 2011

Risk / Emergency / Contingency

28. Emergency Response Plan

Financial

29. Independent audit report, KPMG
30. Financial Summary for RACL June 12
31. Budget Presentation for Year Ending 31 Dec 2013 (23 Oct 2012)
32. KPS Billing System, Input Data Specification, September 2005
33. KPS Billing System, Data Transfer Protocol, December 2005 for creation of Teleperm file
34. KPS Billing System, Calculation Specification, February 2006 for SAP calculation of data