



Quantum  
Assurance

Perth Power Partnership  
Kwinana Co-generation Plant

Electricity Generation Licence

Performance Audit and  
Asset Management  
System Review

Final Report

11 October 2017

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## Executive Summary

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The IPM Perth BV, IPM (Kwinana) Pty Ltd and Transfield Services Energy (Kwinana) Pte Ltd, trading as Perth Power Partnership ('PPP') has an Electricity Generation Licence, issued by the Economic Regulation Authority ('ERA') under the Electricity Industry Act 2004.

PPP operates the Kwinana Co-Generation Plant located within the Kwinana Industrial Area. PPP is owned by the consortium of Engie, Mitsui & Co., Ltd and Ratch Australia.

The plant comprises two gas turbines and one steam turbine generators as part of a combined cycle co-generation plant. The plant has a nameplate capacity of 122.5 electrical output (capacity declared to the Independent Market Operator at ISO conditions) and up to 2,800 tonnes per day of process steam with the use of duct firing on the heat recovery steam generators. Since the plant was commissioned in December 1996, it has operated at high availability levels. The average technical availability factor over the past 19 years is 97.3%.

All of the output from the plant is fully contracted to BP and Synergy (formerly Verve Energy), until November 2021. The gas supply contract from Synergy for BP electricity is in place until 2018 and the initial gas contract for Synergy electricity has been extended to 2021. It is envisaged that the plant will operate as a peaking plant from 1 January 2022 to 2031, attaining an asset life of 35 years.

PPP is required to comply with the terms and conditions of their licence, including applicable legislative provisions and performance reporting as set out in the Electricity Compliance Reporting Manual (July 2017).

This Performance Audit/Asset Management System Review has been conducted in order to assess the licensee's level of compliance with the conditions of its licence and the effectiveness of its asset management system.

The audit covered the period from 1<sup>st</sup> July 2013 to 30<sup>th</sup> June 2017 inclusive.

### **PERFORMANCE AUDIT**

Through the execution of the Audit Plan and assessment and testing of the control environment, the information system, control procedures and compliance attitude, the audit team members have gained reasonable assurance that PPP has complied with its Electricity Generation Licence performance and quality standards and obligations during the audit period 1<sup>st</sup> July 2013 to 30<sup>th</sup> June 2017 with no exceptions.

The audit confirmed that PPP has fully complied with its information reporting obligations for the period 1<sup>st</sup> July 2013 to 30<sup>th</sup> June 2017.

The control environment is considered to be well-designed and effective. No audit recommendations have been made to strengthen the internal controls.

### **ASSET MANAGEMENT SYSTEM EFFECTIVENESS REVIEW**

The review of the Asset Management System has shown that the system is operating effectively and meeting the expected performance standards under ERA's licence.

The policies, procedures and supporting systems to operate and maintain the system are comprehensively documented, maintained and applied. From review of the plant and the asset management system, the plant is being well-managed and maintained.

The review confirmed that the recommendation from the previous review reported in September 2013 has been implemented.

Continued improvements have been made to the asset management system documentation and the overall maintenance and operation of the plant.

There were no recommendations for corrective action.

## Audit Opinion

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### **LIMITATIONS**

Our review has been conducted in accordance with applicable Standards on Assurance Engagements (ASAE) 3000 “Assurance Engagements Other than Audits or Reviews of Historical Financial Information” and 3100 “Compliance Engagements”.

Our audit procedures have been included in Section 1 of this report and have been undertaken to form a conclusion as to whether PPP has complied in all material respects, with the procedures and controls over the performance and quality standards and licence obligations of the Electricity Generation Licence for the period 1<sup>st</sup> July 2013 to 30<sup>th</sup> June 2017 as measured by ERA’s Electricity Compliance Reporting Manual (July 2017).

This report was prepared for distribution to PPP and ERA for the purpose of fulfilling PPP’s reporting obligations under the Electricity Generation Licence. We disclaim any assumption of responsibility for any reliance on this report to any persons or users other than PPP and ERA, or for any purpose other than that for which it was prepared.

Because of the inherent limitations of any internal control environment, it is possible that fraud, error or non-compliance may occur and not be detected. A review is not designed to detect all instances of non-compliance with the procedures and controls over the performance and quality standards and licence obligations of the Electricity Generation Licence, since we do not examine all evidence and every transaction. The review conclusions expressed in this report have been formed on this basis.

### **Auditor’s Unqualified Opinion**

In our opinion, the Perth Power Partnership has complied, in all material respects, with the performance and quality standards and obligations of the Electricity Generation Licence for the period from 1<sup>st</sup> July 2013 to 30<sup>th</sup> June 2017.

We confirm that the ERA’s Audit and Review Guidelines: Electricity and Gas Licences (April 2014) have been complied with in the conduct of this audit and the preparation of the report, and that the audit findings reflect our professional opinion.

### **QUANTUM MANAGEMENT CONSULTING & ASSURANCE**

GEOFF WHITE  
DIRECTOR

PERTH, WA  
11 OCTOBER 2017

Perth Power Partnership  
Kwinana Co-generation Plant

Electricity Generation Licence

Performance Audit and Asset  
Management System Review  
- Introduction

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## 1. Background

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The IPM Perth BV, IPM (Kwinana) Pty Ltd and Transfield Services Energy (Kwinana) Pte Ltd, trading as Perth Power Partnership ('PPP') has an Electricity Generation Licence, issued by the Economic Regulation Authority ('ERA') under the Electricity Industry Act 2004.

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All of the output from the plant is fully contracted to BP and Synergy (formerly Verve Energy), until November 2021. The gas supply contract from Synergy for BP electricity is in place until 2018 and the initial gas contract for Synergy electricity has been extended to 2021. It is envisaged that the plant will operate as a peaking plant from 1 January 2022 to 2031, attaining an asset life of 35 years.

PPP is required to comply with the terms and conditions of their licence, including applicable legislative provisions and performance reporting as set out in the Electricity Compliance Reporting Manual (July 2017).

Not less than once in every period of 36 months unless extended by the ERA, PPP requires a performance audit of compliance with the licence conditions and a review of the asset management system to comply with the licensing requirements of the ERA. This audit period is from 1 July 2013 to 30 June 2017. The previous period was 1 July 2010 to 30 June 2013 (report issued in September 2013).

Our audit approach is based on the compliance obligations set out in the licence (Operating Licence EGL8 (Version 3 dated 13 January 2011 and Version 4 dated 1 July 2015 – minor changes by substitution), applicable legislation and the Audit and Review Guidelines – Electricity and Gas Licences (April 2014) issued by the ERA.

## 2. Methodology

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### 2.1 Objectives and Scope

#### 2.1.1 Performance Audit

The objective of the Performance Audit was to provide an assessment of the effectiveness of measures taken by the licensee to maintain the performance and quality standards referred to in the licence.

The audit applied a risk-based audit approach to focus on the systems and effectiveness of processes used to ensure compliance with the standards, outputs and outcomes required by the licence.

The scope of the audit covered the following:

- ) **process compliance** - the effectiveness of systems and procedures in place throughout the audit period, including the adequacy of internal controls;
- ) **outcome compliance** – the actual performance against standards prescribed in the licence throughout the audit period;
- ) **output compliance** – the existence of the output from systems and procedures throughout the audit period (that is, proper records exist to provide assurance that procedures are being consistently followed and controls are being maintained);
- ) **integrity of reporting** – the completeness and accuracy of the compliance and performance reports provided to ERA; and
- ) **compliance with any individual licence conditions** - the requirements imposed on the specific licensee by ERA or specific issues that are advised by ERA.

The audit reviewed the status of the previous audit recommendations and also sought to identify any areas where improvement is required based on the current audit period.

#### 2.1.2 Asset Management System Review

The objective of the review was to assess the adequacy and effectiveness of the asset management system in place for the undertaking, maintenance and monitoring of the licensee's assets.

The scope of the review included an assessment of the adequacy and effectiveness of the 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.

The review assessed the status of the previous review recommendations and also identified any areas where improvement is required based on this review period.

### 2.2 Audit Period and Timing

The audit covered the period from 1<sup>st</sup> July 2013 to 30<sup>th</sup> June 2017 inclusive and was conducted in August 2017.

The previous audit covered the period 1<sup>st</sup> July 2010 to 30<sup>th</sup> June 2013 inclusive.

### 2.3 Licensee's Representatives Participating in the Audit

)	James Lee	Plant Manager
)	Andrew Usher	Plant Engineer
)	Ken Ferguson	HSEQ Compliance Advisor
)	Mark Jameson	Operations and Maintenance Supervisor
)	Travis Bowden	Business Controller.

### 2.4 Key Documents Examined

- ) PPP Electricity Generation Licence (EGL8, Version 3, 13 January 2011 and Version 4 dated 1 July 2015)
- ) Kwinana Co-generation Plant Electricity Licence Area Generation (Plan ERA-EL-085)
- ) 2013 Performance Audit and Asset Management System Review for Perth Power Partnership (September 2013)
- ) Post-Audit Implementation Plan update and acknowledgment letter from ERA dated 31 March 2014
- ) Compliance Reports to ERA for 2013/14, 2014/15, 2015/16 and 2016/17 and confirmations from ERA
- ) Table of Licence Renewals/Reports Due and Fees
- ) Financial report of payment of licence fees to ERA
- ) Verve (now Synergy) Contract – Supply of Electricity - Power Purchase Agreement
- ) BP Contract – BP Energy and Services Agreement – Supply of Electricity and Steam
- ) Kwinana Co-generation Plant – Business Plan 2017
- ) Kwinana Co-generation Plant – Strategic Asset Management Plan 2016 – 2031 (June 2016)
- ) Perth Power Partnership Annual Reports for the financial years ending 31 December 2014, 2015 and 2016
- ) Kwinana Co-generation Plant Monthly Report – July 2017
- ) Kwinana Operations and Maintenance Agreement – Kwinana Power Partnership
- ) KCP-01 - Environmental Policy
- ) KCP-02 - Maintenance Policy
- ) KCP-02-020 Data Backup procedures
- ) KCP-03 - Operations Policy
- ) KCP-04 - Quality Assurance Policy
- ) KCP-05 - Business Management Policy
- ) KCP-06 - Purchasing & Warehousing Policy
- ) KCP-08 - Health & Safety Policy
- ) KCP Asset Register
- ) Various operating and maintenance procedures supporting these policies
- ) EMPAC Maintenance Work Orders List (planned and unplanned)
- ) Annual Reports to Department of Environment Regulation – 2014, 2015 and 2016.
- ) Department of Environmental Regulation – Inspection Report March 2016
- ) KCP Risk Management Matrix
- ) OPERA Risk Register
- ) KCP Whole of Plant Risk Assessment
- ) GRC Loss Prevention Report – November 2015
- ) SAI Global reports on annual re-certification audits from 2015 to 2017 to Quality Management Systems ISO 9001
- ) Kwinana Co-generation Plant Business Continuity Plan
- ) BCP Annual Testing reports – 2014, 2015 and 2016.
- ) Emergency Response Manual and procedures
- ) List of internal audits/reviews conducted from 2014



## 2.5 Performance Audit - Compliance Ratings

PPP's compliance with the licence obligations was assessed using the following compliance ratings.

Adequacy of Controls Rating		Compliance Rating	
Rating	Description	Rating	Description
A	Adequate controls – no improvement needed	1	Compliant
B	Generally adequate controls – improvement needed	2	Non-compliant – minor impact on customers or third parties
C	Inadequate controls – significant improvement required	3	Non-compliant – moderate impact on customers or third parties
D	No controls evident	4	Non-compliant – major impact on customers or third parties
NP	Not performed – no activity in current period	NR	Not rated – no activity in current period

## 2.6 Asset Management System Review - Effectiveness Ratings

The adequacy of processes and policies, and the performance of the key processes were assessed using the scales described in the tables below.

Asset Management Process and Policy Definition - Adequacy Rating		
Rating	Description	Criteria
A	Adequately defined	<ul style="list-style-type: none"> <li>) Processes and policies are documented.</li> <li>) Processes and policies adequately document the required performance of the assets.</li> <li>) Processes and policies are subject to regular reviews, and updated where necessary.</li> <li>) The asset management information system(s) are adequate in relation to the assets that are being managed.</li> </ul>
B	Requires some improvement	<ul style="list-style-type: none"> <li>) Process and policy documentation requires improvement.</li> <li>) Processes and policies do not adequately document the required performance of the assets.</li> <li>) Reviews of processes and policies are not conducted regularly enough.</li> <li>) The asset management information system(s) require minor improvements (taking into consideration the assets that are being managed).</li> </ul>
C	Requires significant improvement	<ul style="list-style-type: none"> <li>) Process and policy documentation is incomplete or requires significant improvement.</li> <li>) Processes and policies do not document the required performance of the assets.</li> <li>) Processes and policies are significantly out of date.</li> <li>) The asset management information system(s) require significant improvements (taking into consideration the assets that are being managed).</li> </ul>
D	Inadequate	<ul style="list-style-type: none"> <li>) Processes and policies are not documented.</li> <li>) The asset management information system(s) is not for purpose (taking into consideration the assets that are being managed).</li> </ul>

Asset Management Process - Performance Ratings		
Rating	Description	Criteria
1	Performing effectively	<ul style="list-style-type: none"> <li>) The performance of the process meets or exceeds the required levels of performance.</li> <li>) Process effectiveness is regularly assessed, and corrective action taken where necessary.</li> </ul>
2	Opportunity for improvement	<ul style="list-style-type: none"> <li>) The performance of the process requires some improvement to meet the required level.</li> <li>) Process effectiveness reviews are not performed regularly enough.</li> <li>) Process improvement opportunities are not actioned.</li> </ul>
3	Corrective action required	<ul style="list-style-type: none"> <li>) The performance of the process requires significant improvement to meet the required level.</li> <li>) Process effectiveness reviews are performed irregularly, or not at all.</li> <li>) Process improvement opportunities are not actioned.</li> </ul>
4	Serious action required	<ul style="list-style-type: none"> <li>) Process is not performed, or the performance is so poor that the process is considered to be ineffective.</li> </ul>

## 2.7 Audit Team and Hours

NAME AND POSITION	HOURS
Geoff White – Director	30
Susan Smith – Manager	40
Mike Zammit – Consulting Engineer (Qualeng)	25
TOTAL	95

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### 3. Performance Audit

The preliminary risk assessment included in the Audit Plan was reviewed and updated in the course of the audit and a compliance rating using the scale in Section 2.5 was assigned to each obligation under the licence, as shown in Section 3.1. Section 3.2 provides details of the current status of key recommendations from the previous audit. Section 3.3 provides further details of the systems and the compliance assessment for each obligation.

#### 3.1 Summary of Audit Ratings of Control and Compliance

The audit assessment of the ratings for the adequacy of controls and compliance with the legislative obligations is shown below.

No. <sup>1</sup>	Legislative Reference	Licence reference (Cl.=clause, Sch.=schedule)	Audit Priority applied (rated 1 = High to 5 = Low)	Adequacy of Controls Rating <sup>2</sup> (A=Adequate, B=Generally adequate, C=Inadequate, D=No controls, NP=Not performed)					Compliance Rating <sup>3</sup> (1=Compliant 2=Non-compliant - minor impact, 3=Non-compliant – moderate impact, 4=Non- compliant - major impact, NR=Not rated)				
				A	B	C	D	NP	1	2	3	4	NR
<b>Electricity Industry Act 2004</b>													
101	Section 13(1)	Cl. 14.1	5	✓						✓			
102	Section 14(1)(a)	Cl. 20.1	1	✓						✓			
103	Section 14(1)(b)	Cl. 20.2 & 20.3	5	✓						✓			
104	Section 14(1)(c)	Cl. 20.4	5	✓						✓			
105	Section 17(1)	Cl. 4.1	5	✓						✓			
106	Section 31(3)	Cl. 5.1	4	✓						✓			
107	Section 41(6)	Cl. 5.1	5	✓						✓			
119	Section 11	Cl. 12.1	5	✓						✓			
120	Section 11	Cl. 5.1	4					N/A				N/A	
121	Section 11	Cl. 14.2	4	✓						✓			
122	Section 11	Cl. 14.2	4	✓						✓			
123	Section 11	Cl. 15.1	5	✓								✓	
124	Section 11	Cl. 16.1	4	✓						✓			
125	Section 11	Cl. 17.1 & 17.2	4	✓								✓	
126	Section 11	Cl. 18.1	4	✓						✓			
<b>Electricity Industry Metering Code 2005</b>													
324	EI Metering Code clause 3.3B	Cl. 5.1	4	✓								✓	
339	EI Metering Code clause 3.11(3)	Cl. 5.1	4	✓						✓			
364	EI Metering Code clause 3.27	Cl. 5.1	4	✓						✓			
371	EI Metering Code clause 4.4(1)	Cl. 5.1	4	✓						✓			
372	EI Metering Code clause 4.5(1)	Cl. 5.1	4	✓						✓			
373	EI Metering Code clause 4.5(2)	Cl. 5.1	4	✓								✓	
388	EI Metering Code clause 5.4(2)	Cl. 5.1	4	✓						✓			

<sup>1</sup> The number refers to the item reference in the Electricity Compliance Reporting Manual, ERA July 2017 (Note: Only obligations applicable to the Electricity Generation Licence are shown)

<sup>2</sup> Refer Controls and Compliance Rating Scales in Section 2.5.

<sup>3</sup> Refer Controls and Compliance Rating Scales in Section 2.5.

No. <sup>1</sup>	Legislative Reference	Licence reference (Cl.=clause, Sch.=schedule)	Audit Priority applied (rated 1 = High to 5 = Low)	Adequacy of Controls Rating <sup>2</sup> (A=Adequate, B=Generally adequate, C=Inadequate, D=No controls, NP=Not performed)					Compliance Rating <sup>3</sup> (1=Compliant 2=Non-compliant - minor impact, 3=Non-compliant – moderate impact, 4=Non- compliant - major impact, NR=Not rated)					
				A	B	C	D	NP	1	2	3	4	NR	
401	EI Metering Code clause 5.16	Cl. 5.1	4	✓										✓
402	EI Metering Code clause 5.17(1)	Cl. 5.1	4	✓						✓				
405	EI Metering Code clause 5.18	Cl. 5.1	4	✓										✓
406	EI Metering Code clause 5.19(1)	Cl. 5.1	4	✓										✓
407	EI Metering Code clause 5.19(2)	Cl. 5.1	4	✓						✓				
408	EI Metering Code clause 5.19(3)	Cl. 5.1	4	✓										✓
410	EI Metering Code clause 5.19(6)	Cl. 5.1	4	✓										✓
416	EI Metering Code clause 5.21(5)	Cl. 5.1	4	✓										✓
417	EI Metering Code clause 5.21(6)	Cl. 5.1	4	✓										✓
435	EI Metering Code clause 5.27	Cl. 5.1	4	✓										✓
448	EI Metering Code clause 6.1(2)	Cl. 5.1	4	✓										✓
451	EI Metering Code clause 7.2(1)	Cl. 5.1	4	✓						✓				
453	EI Metering Code clause 7.2(4)	Cl. 5.1	4	✓						✓				
454	EI Metering Code clause 7.2(5)	Cl. 5.1	4	✓						✓				
455	EI Metering Code clause 7.5	Cl. 5.1	4	✓						✓				
456	EI Metering Code clause 7.6(1)	Cl. 5.1	4	✓						✓				
457	EI Metering Code clause 8.1(1)	Cl. 5.1	4	✓										✓
458	EI Metering Code clause 8.1(2)	Cl. 5.1	4	✓										✓
459	EI Metering Code clause 8.1(3)	Cl. 5.1	4	✓										✓
460	EI Metering Code clause 8.1(4)	Cl. 5.1	4	✓										✓
461	EI Metering Code clause 8.3(2)	Cl. 5.1	4	✓										✓
	Electricity Licences - Licensee Specific Conditions and Obligations	Cl. 5.1	4						N/A					N/A

### 3.2 Previous Audit Recommendations

There were no recommendations in the previous audit report issued in September 2013.

Ref.	Licence Condition	Previous Audit Findings	Prev. Comp. Rating	Recommended Corrective Actions	Post Audit Action Plan	Action Taken	Status
N/A							

### 3.3 Audit Results and Recommendations

<b>SUMMARY OF COMPLIANCE OBLIGATIONS</b>	
<b>LEGISLATION:</b>	
<b>ELECTRICITY INDUSTRY ACT 2004</b>	<b>Refer list of detailed compliance obligations 101 to 126 below.</b>
<b>REGULATIONS:</b>	
ELECTRICITY INDUSTRY (ACCESS CODE ENFORCEMENT) REGULATIONS 2005	Relates to regulators
ELECTRICITY INDUSTRY (ARBITRATOR AND BOARD FUNDING) REGULATIONS 2005	Relates to regulators
ELECTRICITY INDUSTRY (CODE OF CONDUCT) REGULATIONS 2005	Not applicable to Generation Licence
ELECTRICITY INDUSTRY (CUSTOMER CONTRACTS) REGULATIONS 2005	Not applicable to Generation Licence
ELECTRICITY INDUSTRY (INDEPENDENT MARKET OPERATOR) REGULATIONS 2004	Relates to regulators
<b>ELECTRICITY INDUSTRY (LICENSING FEES) REGULATIONS 2005</b>	<b>Refer detailed compliance clause 105 below.</b>
ELECTRICITY INDUSTRY (LICENCE CONDITIONS) REGULATIONS 2005	Not applicable to Generation Licence
ELECTRICITY INDUSTRY (OBLIGATION TO CONNECT) REGULATIONS 2005	Not applicable to Generation Licence
ELECTRICITY INDUSTRY (OMBUDSMAN SCHEME) REGULATIONS 2005	Relates to regulators
ELECTRICITY INDUSTRY (TARIFF EQUALISATION) REGULATIONS 2006	Relates to regulators
ELECTRICITY INDUSTRY (WHOLESALE ELECTRICITY MARKET) REGULATIONS 2004	Relates to regulators
<b>CODES:</b>	
CODE OF CONDUCT FOR THE SUPPLY OF ELECTRICITY TO SMALL USE CUSTOMERS	Not applicable to Generation Licence
ELECTRICITY INDUSTRY CUSTOMER TRANSFER CODE 2004	Not applicable to Generation Licence
ELECTRICITY NETWORKS ACCESS CODE 2004	Not applicable to Generation Licence
ELECTRICITY INDUSTRY METERING CODE 2005	<b>Refer list of detailed compliance obligations 324 to 461 below (Only obligations applicable to Generation Licences are shown).</b>
ELECTRICITY INDUSTRY (NETWORK QUALITY AND RELIABILITY OF SUPPLY) CODE 2005	Not applicable to Generation Licence

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
<b>DETAILED COMPLIANCE OBLIGATIONS</b>							
<b>ELECTRICITY INDUSTRY ACT 2004</b>							
101	Generation Licence condition 14.1	Electricity Industry Act section 13(1)	A licensee must, not less than once every 24 months, provide ERA with a performance audit conducted by an independent expert acceptable to ERA.	5	The previous Performance Audit covered the period 1 <sup>st</sup> July 2010 to 30 <sup>th</sup> June 2013 in accordance with the period advised by the ERA.  The requirement for the audit is scheduled in EMPAC to generate a work order for Electrical Generation Licence Audit on 15 <sup>th</sup> March with 4 yearly frequencies from 2017 (as per the current audit frequency).  The audit confirmed that Electrical Generation Licence Audit due dates are included in the Table of IPM Kwinana License Renewals/ Reports Due and Fees.	A	1
102	Generation Licence condition 20.1	Electricity Industry Act section 14(1)(a)	A licensee must provide for an asset management system.	1	The audit confirmed that the Asset Management System in respect to the licensed activity is in place.	A	1
103	Generation Licence condition 20.2 and 20.3	Electricity Industry Act section 14(1)(b)	A licensee must notify details of the asset management system and any substantial changes to it to ERA.	4	The licence commencement date was 9 June 2006. The Authority was notified of the licensee's asset management system back then.  The audit confirmed through discussion with the Plant Manager, Plant Engineer and HSEQ Compliance Advisor that there were no substantial changes made to the Asset Management System during the audit period.	A	1

<sup>4</sup> Number refers to the item reference in the Electricity Compliance Reporting Manual, ERA July 2017.

<sup>5</sup> Controls Rating Scale: A=Adequate, B=Generally adequate, C=Inadequate, D=No controls, NP=Not performed.

<sup>6</sup> Compliance Rating Scale: 1=Compliant, 2=Non-compliant - minor impact, 3=Non-compliant – moderate impact, 4=Non-compliant - major impact, NR=Not rated.



No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
104	Generation Licence condition 20.4	Electricity Industry Act section 14(1)(c)	A licensee must provide ERA with a report by an independent expert as to the effectiveness of its asset management system every 24 months, or such longer period as determined by ERA.	5	<p>The previous Asset Management System (AMS) Review covered the period 1<sup>st</sup> July 2010 to 30<sup>th</sup> June 2013 inclusive in accordance with the period advised by the ERA.</p> <p>The requirement for the AMS Review is scheduled in EMPAC to generate a work order for Electrical Generation Licence Audit on 15<sup>th</sup> March with 3 yearly frequencies.</p> <p>The audit confirmed that Electrical Generation Licence Audit due dates are included in the Table of IPM Kwinana License Renewals/ Reports Due and Fees.</p>	A	1
105	Generation Licence condition 4.1	Electricity Industry Act section 17(1)	A licensee must pay to ERA the prescribed licence fee within one month after the day of grant or renewal of the licence and within one month after each anniversary of that day during the term of the licence.	5	<p>The licence was granted on 9<sup>th</sup> June 2006.</p> <p>Sighted work order schedule date in EMPAC to ensure payment of licence fee by due date.</p> <p>Audit sighted the remittance advices and confirmed that the licence fees for 2014 to 2017 were paid by the due date.</p>	A	1
106	Generation Licence condition 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.	4	Audit sighted the Kwinana - Operations & Maintenance Agreement between PPP and IPM (2000). Section 4.2 adequately addresses requirements to maximise electricity generation; high availability targets are set for IPM/PPP safety and environmental performance requirements are specified. Compliance with the Agreement is monitored by Management.	A	1
107	Generation Licence condition 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.	5	The Kwinana site is leased from BP until 2023. This timeframe is aligned with all other relevant contract documentation. It is noted that the ERA Licence is valid until 2036.	A	1

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
					Sighted the Site Lease between BP Refinery (Kwinana) Pty Ltd and Kwinana Power Partnership dated 14th March 1995 and ESA (Energy Services Agreement) between Lessor and Lessee dated 7th March 1995 and Amended and Restated ESA Agreement between the Lessor and the Lessee dated 28 June 2012.		
119	Generation Licence condition 12.1	Electricity Industry Act section 11	A licensee and any related body corporate must maintain accounting records that comply with the Australian Accounting Standards Board Standards or equivalent International Accounting Standards.	5	PPP's Annual Financial Audit for 30 June 2014, 30 June 2015 and 30 June 2016 include statements of compliance by the independent auditor for the compliance with Australian Accounting Standards – Reduced Disclosure Requirements.	A	1
120	Generation Licence condition 5.1	Electricity Industry Act section 11	A licensee must comply with any individual performance standards prescribed by ERA.	N/A	No individual performance standards have been prescribed by ERA per the Licence.	N/A	N/A
121	Generation Licence condition 14.2	Electricity Industry Act section 11	A licensee must comply, and require its auditor to comply, with ERA's standard audit guidelines dealing with the performance audit.	4	The previous Performance Audit covered the period 1 <sup>st</sup> July 2010 to 30 <sup>th</sup> June 2013 inclusive. The previous Audit Report – 2013 Performance Audit and Asset Management Review for Perth Power Partnership dated September 2013 confirms the compliance with ERA's Standard Audit Guidelines.  Also, the Perth Power Partnership: Kwinana Co-generation Plant's Audit Plan - Electricity Generation Licence – Performance Audit and Asset Management System Review (7 August 2017) stipulates compliance requirements on auditors.	A	1

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
122	Generation Licence condition 14.2	Electricity Industry Act section 11	A licensee must comply, and require its auditor to comply, with ERA's standard audit guidelines dealing with the asset management system.	4	<p>The previous Performance Audit covered the period 1<sup>st</sup> July 2010 to 30<sup>th</sup> June 2013 inclusive. The previous Audit Report – 2013 Performance Audit and Asset Management Review for Perth Power Partnership dated September 2013 confirms the compliance with ERA's Standard Audit Guidelines.</p> <p>Also the Perth Power Partnership: Kwinana Co-generation Plant's Audit Plan - Electricity Generation Licence – Performance Audit and Asset Management System Review (7 August 2017) stipulates compliance requirements on auditors.</p>	A	1
123	Generation Licence condition 15.1	Electricity Industry Act section 11	A licensee must report to ERA, in the manner prescribed, if a licensee is under external administration or there is a significant change in the circumstances upon which the licence was granted which may affect a licensee's ability to meet its obligations.	5	The audit confirmed with the KPC's Plant Manager that during the audit period, PPP wasn't under external administration, there was no significant change in its financial or technical circumstances that could affect PPP's ability to meet its obligations under the licence.	A	N/R
124	Generation Licence condition 16.1	Electricity Industry Act section 11	A licensee must provide ERA, in the manner prescribed, any information ERA requires in connection with its functions under the Electricity Industry Act.	4	<p>In accordance with the Electricity Compliance Reporting Manual July 2017, PPP is required to submit to ERA an annual compliance reports by 31 August for the year ending 30 June.</p> <p>The audit reviewed PPP's Compliance Reports for the years ending 30 June 2014, 2015, 2016 and 2017 and confirmed that all reports were submitted by the due date.</p> <p>In order to meet all reporting deadlines, PPP has developed a Table of IPM Kwinana License Renewals, Reports Due and Fees and the EMPAC will generate</p>	A	1

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
					<p>work orders when due. Audit has confirmed that the annual Compliance Report submission due date is included in the Table.</p> <p>In addition to the reporting requirements under the Electricity Compliance Reporting Manual, PPP provided updates of the Post-Audit Implementation Plan (PAIP) in respect of the 2013 performance audit and asset management system review.</p> <p>PPP provided its final update to ERA in March 2014 that closed the issue.</p>		
125	Generation Licence condition 17.1 and 17.2.	Electricity Industry Act section 11	A licensee must publish any information it is directed by ERA to publish, within the timeframes specified.	4	The audit confirmed with the KPC's Plant Manager that during the audit period, no such directions were received from ERA.	A	N/R
126	Generation Licence condition 18.1.	Electricity Industry Act section 11	Unless otherwise specified, all notices must be in writing.	4	The use of ERA's reporting protocols was confirmed in discussion with the Plant Manager and through the review of various correspondence and electronic communication between PPP and other parties during the performance of this audit.	A	1
<b>ELECTRICITY INDUSTRY METERING CODE 2005</b>							
324	Generation Licence condition 5.1	Electricity Industry Metering Code clause 3.3B	A user who is aware of bi-directional flows at a metering point which was not previously subject to a bi-directional electricity flows or any changes in a customer's or user's circumstances in a metering	4	<p>Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995. WP and System Management have direct control of metering.</p> <p>Audit confirmed with the KPC's Plant Engineer that PPP does not own the meters and as such do not subcontract</p>	A	N/R

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
			point which will result in bi-directional electricity flows must notify the network operator within 2 business days.		<p>anyone to look after the meters. There is no Service Level Agreement in place. WP owns the meters. PPP have no access to the meters and only receive a metering data file from WP each month.</p> <p>The KPC's Plant Engineer advised that meters to BP are unidirectional and meters to Verve are bi-directional (export/import). During the audit period, no changes have been made to these arrangements that have come to PPP's attention.</p>		
339	Generation Licence condition 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.	4	<p>The licensee still has an obligation to report malfunction of a metering installation. Audit confirmed with the KPC's Plant Engineer that there are systems established and adequate monitoring programs in place to identify a malfunction should it not be identified by the Network Operator in the first instance.</p> <p>PPP has no access to the meters and only receives a metering data file from WP each month. The data file is then compared with the internal information measured by megawatt transducers for any specific apparent disagreements. Any suspected disagreements in the metering data file are then advised to WP for follow up.</p>	A	1
364	Generation Licence condition 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.	4	<p>Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995.</p> <p>Tariff meters installed at the Kwinana Co-generation Plant are the responsibility of WP. Sighted Certificates of Conformance to AS62053 provided by Western Power for replacement meters installed.</p>	A	1

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
371	Generation Licence condition 5.1	Electricity Industry Metering Code clause 4.4(1)	If there is a discrepancy between energy data held in a metering installation and data held in the metering database, the affected Code participants and the network operator must liaise together to determine the most appropriate way to resolve a discrepancy.	4	<p>Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995. WP and System Management have direct control of metering.</p> <p>Audit confirmed with the Plant Engineer that PPP does not have access to the metering database. PPP has no access to the meters either and only receives a metering data file from WP each month. The data file is then compared with the internal information measured by megawatt transducers for any specific apparent disagreements such as wrong month's data, transposition error, time reset on meters etc. Any suspected disagreements in the metering data file are then advised to WP for follow up.</p>	A	1
372	Generation Licence condition 5.1	Electricity Industry Metering Code clause 4.5(1)	A Code participant must not knowingly permit the registry to be materially inaccurate.	4	<p>Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995. WP and System Management have direct control of metering.</p> <p>Audit confirmed with the Plant Engineer that PPP does not have access to the metering database. PPP have no access to the meters either and only receives metering data file from WP on monthly bases. The data file is then compared with the internal information measured by megawatt transducers for any specific apparent disagreements such as wrong month's data, transposition error, time reset on meters etc. Any suspected disagreements in the metering data file are then advised to WP for follow up.</p>	A	1

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
373	Generation Licence condition 5.1	Electricity Industry Metering Code clause 4.5(2)	Subject to sub clause 5.19(6), if a Code participant, other than a network operator, becomes aware of a change to, or an inaccuracy in, an item of standing data in the registry, then it must notify the network operator and provide details of the change or inaccuracy within the timeframes prescribed.	4	<p>Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995. WP and System Management have direct control of metering.</p> <p>Audit confirmed with the Plant Engineer that PPP does not have access to the metering database.</p> <p>Audit confirmed with the KPC's Plant Engineer that, during the audit period, no change to or inaccuracy in an item of standing data in the registry came to PPP's attention.</p>	A	N/R
388	Generation Licence condition 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 obligations.	4	<p>Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995.</p> <p>Audit confirmed in discussion with the Plant Engineer and through the review of various correspondence and electronic communication between PPP and Verve/WP during the performance of this audit, that when requested, PPP uses reasonable endeavours to assist Verve/WP.</p>	A	1
401	Generation Licence condition 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.	4	<p>Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995.</p> <p>Audit confirmed with the Plant Engineer that PPP does not own the meters and as such do not subcontract anyone to look after the meters. There is no Service Level Agreement in place. WP owns the meters. PPP has no access to the meters and does not collect or</p>	A	N/R

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
					receive energy data from the metering installations. PPP only receives a metering data file from WP each month.		
402	Generation Licence condition 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.	4	<p>Billing and payments clauses are included in both power purchasing contracts with Synergy and BP.</p> <p>Audit has sighted the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995 and ESA (Energy Services Agreement) between the Kwinana Power Partnership and BP Refinery (Kwinana) as well as Amended and Restated ESA Agreement dated 28 June 2012.</p> <p>PPP has no access to the meters and does not collect or receive energy data from the metering installations. PPP only receives a metering data file from WP each month. The data file is then compared with the internal information measured by megawatt transducers for any specific apparent disagreements such as wrong month's data, transposition error, time reset on meters etc. Any suspected disagreements in the metering data file are then advised to WP for follow up.</p> <p>A draft invoice with the raw metering data file is then provided to Synergy for review. When Synergy agrees that the data is correct, PPP then issues the final invoice.</p> <p>PPP provides BP with the final invoice together with the raw metering data file. BP does not check the data prior to PPP's final invoice being issued.</p>	A	1
405	Generation Licence condition 5.1	Electricity Industry	A user that collects or receives information regarding a change in the energisation status of a	4	Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March	A	N/R



No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
		Metering Code clause 5.18	metering point must provide the network operator with the prescribed information, including the stated attributes, within the timeframes prescribed.		1995. WP and System Management have direct control of metering.  Audit confirmed with the Plant Engineer that PPP does not own the meters and as such do not subcontract anyone to look after the meters. There is no Service Level Agreement in place. WP owns the meters. PPP has no access to the meters and does not collect or receive energy data from the metering installations. PPP only receives a metering data file from WP each month.		
406	Generation Licence condition 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.	4	Audit confirmed with the Plant Engineer that, during the audit period, no requests to collect information from customers have been received from the network operator.	A	N/R
407	Generation Licence condition 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.	4	Audit has sighted the Contact Register and noted for both BP Refinery and Synergy, it contains the National Meter Identifier (NMI), NMI location, contact person, phone, physical address and postal address.  PPP have NMI's for each of the connection points and neither has anyone requiring life support at their facilities.	A	1
408	Generation Licence condition 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 1 business day.	4	Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995. WP and System Management have direct control of metering.	A	N/R

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
					Audit confirmed with the KPC's Plant Engineer that, during the audit period, no change in site prescribed attributes came to PPP's attention.		
410	Generation Licence condition 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 change in an attribute that results from the provision of standing data by the network operator to the user.	4	This is to prevent a loop situation occurring.  Audit confirmed with the Plant Engineer that, during the audit period, no change in the address attributes, site attributes or customer attributes came to PPP's attention and as such there was no notification of the change to the network operator.	A	N/R
416	Generation Licence condition 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.	4	Audit confirmed with the Plant Engineer that, during the audit period, PPP hasn't requested any test or audit.	A	N/R
417	Generation Licence condition 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.	4	Audit confirmed with the Plant Engineer that, during the audit period, PPP hasn't requested any test or audit.	A	N/R
435	Generation Licence condition 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.	4	Audit confirmed with the Plant Engineer that, during the audit period, no request to provide customer attribute information was received from the network operator.	A	N/R
448	Generation Licence condition 5.1	Electricity Industry	A user must, in relation to a network on which it has an access contract, comply with the	4	Metering is managed by Western Power (WP) via the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March	A	N/R

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
		Metering Code clause 6.1(2)	rules, procedures, agreements and criteria prescribed.		<p>1995. WP and System Management have direct control of metering.</p> <p>'System Management' is a segregated business unit within Western Power established under the Wholesale Electricity Market Rules. System Management is responsible for the operation and control of generator facilities, transmission and distribution networks, and large customer retailer supply management including demand side management.</p> <p>Audit confirmed with the Plant Engineer that PPP does not own the meters and as such do not subcontract anyone to look after the meters. There is no Service Level Agreement in place. WP owns the meters.</p> <p>Audit has sighted the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995.</p>		
451	Generation Licence condition 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.	4	<p>The use of post, facsimile and electronic methods of communication was confirmed in discussion with the Plant Manager, Business Controller and Plant Engineer and through the review of various correspondence and electronic communication between PPP and other parties during the performance of this audit.</p> <p>During the performance of this audit, audit reviewed the email conversation between PPP's staff members and other parties and confirmed that PPP's staff telephone contact details are included in each staff email signature.</p>	A	1
453	Generation Licence condition 5.1	Electricity Industry	A Code participant must notify its contact details to a network operator with whom it has	4	As per item No. 451.	A	1

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
		Metering Code clause 7.2(4)	entered into an access contract within 3 business days after the network operator's request.				
454	Generation Licence condition 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.	4	As per item No. 451. Relates to the notification of changes as per Electricity Industry Metering Code clause 7.2(4).	A	1
455	Generation Licence condition 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.	4	Confidentiality clauses are included in both power purchasing contracts with Synergy and BP.  Audit has sighted the confidentiality clauses included in the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995 and ESA (Energy Services Agreement) between the Kwinana Power Partnership and BP Refinery (Kwinana) as well as the Amended and Restated ESA Agreement dated 28 June 2012 and confirmed confidentiality clauses cover the requirements of this clause 7.5 of the Code.	A	1
456	Generation Licence condition 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.	4	Confidentiality clauses are included in both power purchasing contracts with Synergy and BP.  Audit has sighted the confidentiality clauses included in the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995 and ESA (Energy Services Agreement) between the Kwinana Power Partnership and BP Refinery (Kwinana) as well as the Amended and Restated ESA Agreement dated 28 June 2012 and confirmed adequate dispute resolution processes are in place.	A	1

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
457	Generation Licence condition 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.	4	<p>Audit confirmed with the Plant Engineer that, during the audit period, there were no disputes between PPP and other Code Participants and therefore no dispute resolution has taken place.</p> <p>Dispute resolution process is outlined in both power purchasing contracts with Synergy and BP.</p> <p>Audit has sighted the dispute resolution clauses included in the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995 and ESA (Energy Services Agreement) between the Kwinana Power Partnership and BP Refinery (Kwinana) as well as the Amended and Restated ESA Agreement dated 28 June 2012 and confirmed adequate dispute resolution processes are in place.</p>	A	N/R
458	Generation Licence condition 5.1	Electricity Industry Metering Code clause 8.1(2)	If a dispute is not resolved within 10 business days after the dispute is referred to representative negotiations, the disputing parties must refer the dispute to a senior management officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.	4	Refer item 457 above	A	N/R
459	Generation Licence condition 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	4	Refer item 457 above	A	N/R

No <sup>4</sup>	Licence Condition	Obligation Under Licence Condition	Description	Audit Priority (1=highest, 5=lowest)	System established to comply with licence obligation (including any potential improvements)	Adequacy of Controls Rating <sup>5</sup>	Compliance rating <sup>6</sup>
			officer of each disputing party who must meet and attempt to resolve the dispute by negotiations in good faith.				
460	Generation Licence condition 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.	4	Refer item 457 above	A	N/R
461	Generation Licence condition 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.	4	Refer item 457 above	A	N/R

### **3.4 Recommended Changes to the Licence**

No changes to the licence are considered necessary.

### **3.5 Conclusion**

Through the execution of the Audit Plan and assessment and testing of the control environment, the information system, control procedures and compliance attitude, the audit team members have gained reasonable assurance that PPP has complied with its Electricity Generation Licence performance and quality standards and obligations during the audit period 1<sup>st</sup> July 2013 to 30<sup>th</sup> June 2017 with no exceptions.

The audit confirmed that PPP has fully complied with its information reporting obligations for the period 1<sup>st</sup> July 2013 to 30<sup>th</sup> June 2017.

The control environment is considered to be well-designed and effective. No audit recommendations have been made to strengthen the internal controls.

Perth Power Partnership  
Kwinana Co-generation Plant

Electricity Generation Licence

Asset Management System  
Effectiveness Review  
– Detailed Report

Final Report

11 October 2017



## 4. Asset Management System Review

The effectiveness of PPP's asset management system was assessed using the asset management system process and policy definitions ratings and the performance ratings (refer section 2.6) as provided by ERA in the Audit Guidelines.

The review has assessed and rated these key processes as shown in Section 4.1.

Section 4.2 provides details of the current status of recommendations from the previous review.

Section 4.3 provides further details of the systems and the effectiveness rating for each process in the asset management system.

### 4.1 Summary of Asset Management System Ratings

The audit assessment of the asset management system process and policy definitions and their effectiveness, based on the ratings scale in Section 2.6, is shown in the table below.

Section 4.3 provides further details of the rating for each process in the asset management system.

ASSET MANAGEMENT SYSTEM	Process and policy definition rating				Performance rating				
	Adequately defined (A)	Requires some improvement (B)	Requires significant improvement (C)	Inadequate (D)	Performing effectively (1)	Opportunity for improvement (2)	Corrective action required (3)	Serious action required (4)	Not Rated
1. Asset planning	√				√				
2. Asset creation/ acquisition	√				√				
3. Asset disposal	√				√				
4. Environmental analysis	√				√				
5. Asset operations	√				√				
6. Asset maintenance	√				√				
7. Asset management information system	√				√				
8. Risk management	√				√				
9. Contingency planning	√				√				
10. Financial planning	√				√				
11. Capital expenditure planning	√				√				
12. Review of asset management system	√				√				

## 4.2 Previous Review Recommendations

The status of the recommendation in the previous audit report issued in September 2013 is summarised below.

Ref.	Asset Management Element	Previous Review Findings	Prev. Effect. Rating	Recommended Corrective Actions	Post Audit Action Plan	Action Taken	Status
2013/1	<p><b>Contingency Planning</b></p> <p>Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.</p>	<p><b>Contingency Planning - Testing</b></p> <p>Contingency plans should be documented, understood and tested to confirm their operability and to cover higher risks.</p> <p>There are well documented plans for site emergency, incident and evacuation which are reviewed annually, updated accordingly, monitored and tested. Staff evacuation and plant/operations protection plans are also in place as part of the Kwinana Industrial zone.</p> <p>The Business Continuity Plan (BCP) includes Emergency Responses, Crisis Management and Business Recovery procedures. Review of the BCP is scheduled annually in the Internal Audit Schedule (latest</p>	B, 3	<p>PPP should include in the BCP, a structured testing plan covering the frequency and manner of testing individual components of the Plan (e.g. emergency evacuation, the alternate site control centre, etc.) and a full scenario test involving all key participants.</p>	<p>PPP conducts internal audits of the BCP annually and seeks to test those functions such as contingency box recovery and contents, availability of office accommodation and equipment, backup of tapes, access to files records etc....</p> <p>A recent internal management meeting identified the need to conduct a full test of the BCP against a catastrophic event and hence it is planned to conduct a review prior to December 2013.</p> <p>Variations to this planned exercise of a catastrophic event will follow in future years to cover the partial loss of the business.</p>	<p>A test of the BCP was completed on 18 December 2013. A structured test plan has now been included in the BCP for periodic testing of BCP elements.</p> <p>The audit confirmed that annual tests have been completed in 2014, 2015 and 2016.</p>	<b>COMPLETED</b>

Ref.	Asset Management Element	Previous Review Findings	Prev. Effect. Rating	Recommended Corrective Actions	Post Audit Action Plan	Action Taken	Status
		<p>review was May 2012 with no changes).</p> <p>Audit noted that PPP's emergency response reaction and processes have been tested by real time emergency response exercises at least annually over the past two years.</p> <p>However, the BCP does not include a structured testing plan to ensure that key components are tested and participants receive training in the implementation of the Plan on a regular basis, such as at least annually.</p>					

### 4.3 Review Results and Recommendations

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
		Process Rating <sup>7</sup>	A	Performance Rating <sup>8</sup>	1
<b>1</b>	<b>ASSET PLANNING</b>				
1.1	Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning.	Audit has discussed the asset planning process with the KCP's Business Controller and the KCP's Plant Engineer. Asset strategies are documented within business plans which are reviewed and updated on an annual basis. Asset planning is based on the long-term operation and maintenance requirements as detailed in the Kwinana - Operational & Maintenance Agreement 2000 and the service levels as defined through the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995 and ESA (Energy Services Agreement) between the Kwinana Power Partnership and BP Refinery (Kwinana) as well as the Amended and Restated ESA Agreement dated 28 June 2012.			
1.2	Service levels are defined.	Service levels are defined through the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995 and ESA (Energy Services Agreement) between the Kwinana Power Partnership and BP Refinery (Kwinana) as well as Amended and Restated ESA Agreement dated 28 June 2012. Long term service levels are detailed in the Kwinana - Operations and Maintenance Agreement 2000 and the business plan provides a 5-year prediction of service levels.  The "PPP Strategic Asset Management Plan 2016" (SAMP) showed that strategies are in place to monitor and maintain the plant to a satisfactory level.  Service levels are regularly reported upon in the Monthly Reports and during the bi-monthly PPP Meetings. Audit has sighted the Monthly Report for June 2017.			
1.3	Non-asset options (e.g. demand management) are considered.	Agreements with Synergy and BP are well defined and clear in relation to demand management. Plant output is matched to BP steam demand and BP and Synergy generation requirements.			
1.4	Lifecycle costs of owning and operating assets are assessed.	Life cycle costs are monitored, evaluated, and incorporated into the business and budget planning processes.			
1.5	Funding options are evaluated.	Alternative funding options are evaluated at the Board level on an annual basis.  Operational and maintenance costs are self-funded while capital expenditure is primarily facilitated through working capital and if necessary, the facility agreement in place..			

<sup>7</sup> Process ratings: A=adequately defined, B=requires some improvement, C=requires significant improvement, D=inadequate.

<sup>8</sup> Performance ratings: 1=performing effectively, 2=opportunity for improvement, 3=corrective action required, 4=serious action required

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)				
1.6	Costs are justified and cost drivers identified.	Budgets are approved on an annual basis. Spending limits have been established. Costs for non-budgeted items require separate approval. Monthly and annual reports provide details on budget and cost drivers. Variances are monitored and actioned.				
1.7	Likelihood and consequences of asset failure are predicted.	The likelihood and consequences of asset failure are analysed and risk rated in the Kwinana Co-generation Plant Whole of Plant Risk Assessment (updated August 2016).  Plant availability and incidents are regularly reported, and procedures exist to ensure that all incidents are reviewed. Significant failures and incidents are entered into the EMPAC incident database, included into monthly reports and discussed at tool box and monthly meetings. Audit has sighted the KCP-08-05 Accident / Incident Reporting, Investigation and Management procedure.				
1.8	Plans are regularly reviewed and updated.	All plans are reviewed on a monthly, quarterly and annual basis and an internal audit schedule exists documenting the review of plans and procedures.				
<b>2</b>	<b>ASSET CREATION/ ACQUISITION</b>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Process Rating</td> <td style="text-align: center; background-color: #28a745; color: white;">A</td> <td style="text-align: center;">Performance Rating</td> <td style="text-align: center; background-color: #28a745; color: white;">1</td> </tr> </table>	Process Rating	A	Performance Rating	1
Process Rating	A	Performance Rating	1			
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions.	Audit has discussed the asset acquisition/creation process with the Business Controller and the Plant Engineer.  Project evaluations of new assets are well documented reviewed and controlled. The impact on service delivery and costs are assessed as part of the modification procedure. The plant is well established and only minor changes to the original plant have been performed to date or planned for the future.				
2.2	Evaluations include all life-cycle costs.	Life-cycle costs are evaluated as part of the modification procedure as outlined above.				
2.3	Projects reflect sound engineering and business decisions.	Project design and costing of new asset is well documented, monitored and controlled. The impact on service delivery, costs and safety are assessed as part of the modification procedure. The plant is well established and only minor changes to the original plant have been performed to date or are planned for the future.  All projects are reviewed by the Plant Engineer and the Business Controller before approval.				
2.4	Commissioning tests are documented and completed.	Documented procedures exist to ensure that commissioning tests and data are conducted and documented.				
2.5	Ongoing legal/environmental/safety obligations of the asset owner are assigned and understood.	Audit has discussed the process of ongoing monitoring legal/environmental/safety obligations with the HSEQ Compliance Advisor.  Legal, environmental and safety obligations are well understood, documented, monitored and controlled. Audit has sighted the Table of IPM Kwinana Licence Renewals, Reports Due and Fees.				

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
		The plant has been certified by SAI Global during annual re-certification audits from 2015 to 2017 to Quality Management Systems ISO 9001 with no major non-conformances.			
<b>3</b>	<b>ASSET DISPOSAL</b>	Process Rating	<b>A</b>	Performance Rating	<b>1</b>
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process.	<p>Audit has discussed the asset disposal process with the Business Controller and the Plant Engineer.</p> <p>Plant performance data is recorded within the DCIS system. Foxboro Distributed Control Information System (DCIS) software is used to monitor and control plant and equipment and to log data into the DAS. Wonderware Data Acquisition System (DAS) software is used to store and retrieve data and to provide management of information.</p> <p>Inspections of equipment are regularly performed as part of the preventative and predictive maintenance system in EMPAC. The asset performance and condition is reviewed and reported in the monthly reports. Under-utilised and under-performing assets are identified and action taken as required.</p>			
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken.	<p>The reasons for asset underutilisation or under-performance are investigated. Each asset identified as redundant, underperforming or requiring replacement is initially examined to see if alternative measures can be taken to restore its performance or utilisation before instigating disposal measures.</p> <p>Audit has sighted the following documentation:</p> <ul style="list-style-type: none"> <li>o KCP-05-25 Disposal of Redundant Assets procedure</li> <li>o KCP-01-08 Waste Disposal procedure</li> <li>o KCP-06-07 Spare Parts Policy procedure</li> </ul>			
3.3	Disposal alternatives are evaluated.	<p>Asset disposal alternatives are investigated and the most appropriate method adopted. Assets of value are sold to staff or externally, or donated to the community as appropriate. Assets of little or no value are disposed of as waste.</p> <p>Audit has sighted the following documentation:</p> <ul style="list-style-type: none"> <li>o KCP-05-25 Disposal of Redundant Assets procedure</li> <li>o KCP-01-08 Waste Disposal procedure</li> <li>o KCP-06-07 Spare Parts Policy procedure</li> </ul>			
3.4	There is a replacement strategy for assets.	Asset replacement plans are well documented. Although, most of the plant is designed to last for the life of the operation, extensive risk assessment of whole of plant is carried out annually.			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
		Consumables and equipment that require replacement before the end of the plant operational life are replaced as appropriate. Equipment manufacturer recommendations and good industry practices have been included into the preventative and predictive maintenance system in EMPAC.			
<b>4</b>	<b>ENVIRONMENTAL ANALYSIS</b>	Process Rating	<b>A</b>	Performance Rating	<b>1</b>
4.1	Opportunities and threats in the system environment are assessed.	<p>Opportunities and threats are reviewed and assessed as part of the annual business and planning process and regularly reviewed within the monthly reports.</p> <p>Risk management is an integral part of the business planning process at PPP. The plant has been certified by SAI Global during annual re-certification audits from 2015 to 2017 to Quality Management Systems ISO 9001 with no major non-conformances.</p>			
4.2	Performance standards (availability of service, capacity, continuity, emergency response, etc) are measured and achieved.	The monthly report documents the performance of the plant (availability, capacity, incidents, fuel supply and customer demand) and is reviewed by plant management.			
4.3	Compliance with statutory and regulatory requirements.	<p>Statutory and regulatory requirements are documented in the Table of IPM Kwinana Licence Renewals, Reports Due and Fees and regularly reviewed via the quarterly compliance meetings. Internal and external audit recommendations are tabled and action plans monitored.</p> <p>The audit sighted the Annual Compliance Reports to Department of Environment Regulation for 2014, 2015 and 2016 – three minor non-compliances reported and have been rectified.</p> <p>An inspection was carried out by the Department of Environmental Regulation in March 2016 to assess licence compliance and in regard to its environmental obligations. The report conclusion was the controls were satisfactory and risk was rated as low.</p>			
4.4	Achievement of customer service levels.	<p>Service levels are defined through the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995 and ESA (Energy Services Agreement) between the Kwinana Power Partnership and BP Refinery (Kwinana) as well as the Amended and Restated ESA Agreement dated 28 June 2012. Long term service levels are detailed in the Kwinana - Operations and Maintenance Agreement 2000 and the business plan provides a 5-year prediction of service levels.</p> <p>Service levels are regularly reported upon in the Monthly Reports and during the bi-monthly meetings. Audit has sighted a sample of Monthly Reports and Minutes of Meetings.</p>			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
<b>5</b>	<b>ASSET OPERATIONS</b>	Process Rating	<b>A</b>	Performance Rating	<b>1</b>
5.1	Operational policies and procedures are documented and linked to service levels required.	<p>PPP's operating policies and procedures (including emergency procedures) are well documented in the EMPAC system and regularly reviewed as part of the Internal Audit process.</p> <p>Service levels are defined through the Electricity Generation Corporation (Verve Energy/now Synergy) – Power Purchase Agreement dated 10 March 1995 and ESA (Energy Services Agreement) between the Kwinana Power Partnership and BP Refinery (Kwinana) as well as the Amended and Restated ESA Agreement dated 28 June 2012. Long term service levels are detailed in the Kwinana - Operations and Maintenance Agreement 2000 and the business plan provides a 5-year prediction of service levels.</p> <p>Service levels are regularly reported upon in the Monthly Reports and during the bi-monthly PPP Meetings, and are incorporated into the operating procedures e.g. KCP-03-02 Fuel/Gas Management procedure. Various operating policies and procedures were sighted.</p>			
5.2	Risk management is applied to prioritise operations tasks.	Operational tasks are prioritised at the weekly toolbox meetings and on an ongoing basis. A combination of EMPAC data, DCS data, operating procedures and plant knowledge and history are utilised to risk rate and prioritise operating tasks.			
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.	<p>All assets including the asset type, location, material, plans of components, and an assessment of assets' physical/structural condition and accounting data as well as their maintenance history and schedules and the costing details for plant maintenance are recorded within EMPAC system database. EMPAC asset management and maintenance software &amp; latest Lotus Notes Database are used to manage plans, policies, procedures and issues relating to maintenance, operations, environment, quality assurance, costing, procurement, warehousing, occupational health and safety, community and employees.</p> <p>Plant performance data is recorded within the DCIS system. Foxboro Distributed Control Information System (DCIS) software is used to monitor and control plant and equipment and to log data into the DAS. Wonderware Data Acquisition System (DAS) software is used to store and retrieve data and to provide management of information.</p>			
5.4	Operational costs are measured and monitored.	<p>Operational budgets (operations &amp; maintenance) are set annually and form part of the annual business planning process. Operational costs form part of maintenance costs. EMPAC is used to record costs on a work order basis and reported on a plant area basis.</p> <p>Operational costs are monitored and reported regularly via the monthly reports. Deviations from budget are reported and investigated.</p>			



Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
5.5	Staff receive training commensurate with their responsibilities.	Staff training is planned and recorded. A training matrix exists to ensure staff receive the correct training. Ongoing training is planned and monitored. Audit has sighted various training policies, training matrix and register.			
<b>6</b>	<b>ASSET MAINTENANCE</b>	Process Rating	<b>A</b>	Performance Rating	<b>1</b>
6.1	Maintenance policies and procedures are documented and linked to service levels required.	Maintenance plans, policy and procedures are well documented in the Enterprise maintenance management (EMPAC) system and regularly reviewed as part of the annual business planning process and reflect the service levels required by the stakeholders. An extensive set of procedures is in place. The "Management of Maintenance" procedure was examined. Procedures guide routine tasks such as lubrication, performance tests and enforce safety through permit to work systems and safety instructions. The maintenance plans, policy and procedures are also being reviewed annually as part of the Internal Audit process.			
6.2	Regular inspections are undertaken of asset performance and condition.	The planned maintenance program is well managed. It follows operating and maintenance manuals, the manufacturer's recommendations and industry practices. Some of the plant follows manufacturer's recommended maintenance regimes to maintain manufacturer guarantees. Maintenance tasks are entered in the EMPAC system. The entirety of the plant is subject to regular inspection and maintenance which are performed both at regular intervals and at operating intervals. Regular inspections are scheduled by the EMPAC system and assigned to resources as work orders at tool box meetings. The site inspection provided evidence of good-housekeeping.			
6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule.	Major maintenance plans are included in the business planning process and documented within the Strategic Asset Management Plan. Both predictive and preventive maintenance are in use. The maintenance tasks are loaded in the EMPAC system which then generates weekly Work Orders and Work Reports. The work management system is well designed to track work activities and for follow-ups. Overdue work orders are reviewed and followed up as required. Work orders older than 60 days are automatically reported by EMPAC. Review of Maintenance Data showed that maintenance had been carried out as per maintenance plans. Maintenance plans appear adequate for the plant type and operation and maintenance has been carried out in accordance with maintenance plans. The "Kwinana Cogeneration Plant Maintenance Prediction" table shows the planned dates for maintenance of the turbines up to 2031. Planned maintenance is in line with manufacturers' recommendations.			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
6.4	Failures are analysed and operational/maintenance plans adjusted where necessary.	Asset failures are repaired, documented, reviewed, investigated if appropriate and plans modified if appropriate. Significant failures and incidents are entered into the EMPAC incident database, included into monthly reports and discussed at tool box and monthly meetings.			
6.5	Risk management is applied to prioritise maintenance tasks.	Maintenance tasks are prioritised during the annual planning process utilising the whole of plant risk assessments and survey and the plant history.  Day to day maintenance tasks are programmed via EMPAC and prioritised at the toolbox meetings, a combination of EMPAC data, operating procedures and plant knowledge history are utilised to risk rate and prioritise maintenance tasks.			
6.6	Maintenance costs are measured and monitored.	Operational budgets (operations & maintenance) are set annually and form part of the annual business planning process. EMPAC is used to record costs on a work order basis and reported on a plant area basis. Maintenance costs are monitored and reported regularly via the monthly reports. Deviations from budget are reported and investigated.			
<b>7</b>	<b>ASSET MANAGEMENT INFORMATION SYSTEM</b>	Process Rating	<b>A</b>	Performance Rating	<b>1</b>
7.1	Adequate system documentation for users and IT operators.	<p>PPP utilises the following information systems:</p> <ul style="list-style-type: none"> <li>) EMPAC 2.12 asset management and maintenance software and SharePoint/SQL database are used to manage plans, policies, procedures and issues relating to maintenance, operations, environment, quality assurance, costing, procurement, warehousing, occupational health and safety, community and employees.</li> <li>) Foxboro Distributed Control Information System (DCIS) software – is used to monitor and control plant and equipment and to log data into the DAS.</li> <li>) Wonderware Data Acquisition System (DAS) software – is used to store and retrieve data and to provide management of information.</li> </ul> <p>Asset information systems are well documented for users and IT administrators, EMPAC includes an on-line help system. There are documented procedures in place for the maintenance and back-up of the data control system. Users and IT administrators receive appropriate formal and on the job training to operate the information systems.</p>			
7.2	Input controls include appropriate verification and validation of data entered into the system.	<p>Validation of input information is performed by supervisors as appropriate based on the hierarchy of controls.</p> <p>Security controls are in place as per Item no. 7.3 to ensure that only authorised staff are allowed to input certain information. Changes to procedures and policies are strictly controlled within the EMPAC system.</p>			

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)				
7.3	Logical security access controls appear adequate, such as passwords.	Computer system access is well controlled and only available to site staff. The IT manager provides user names and passwords to new users and assigns access rights as appropriate. Users are automatically prompted to change passwords on a monthly basis. The IT manager changes access rights and removes users from the computer systems as appropriate.				
7.4	Physical security access controls appear adequate.	Physical access is well controlled via a number of security measures that were sighted during the audit. These include restricted vehicle access via a monitored boom gate to the plant/office, escorted visitor entry, security ID access to restricted areas including the main office and control room. Also, data backups kept in fireproof safe with access restricted to authorised personnel only.				
7.5	Data backup procedures appear adequate.	<p>Audit confirmed that data is being backed up on a daily and weekly basis and tapes are being stored in the fire proof safe. The tapes are being taken for storage off-site once a week.</p> <p>Compliance with the procedures (KCP02-20, KCP02-21 and KCP02-22) is being checked as part of annual internal audit by the HSEQ Compliance Advisor. Audit has sighted the Internal Audit Schedule for 2014 to 2017.</p>				
7.6	Key computations related to licensee performance reporting are materially accurate.	<p>Monitoring of electrical output to both Synergy and BP is by Western Power calibrated metering at the Mason Road switchyard. The method of measurement of ambient temperature for this plant is SCADA Cockburn. Natural gas supply is monitored by the Dampier Bunbury Gas Pipeline and refinery gas by BP.</p> <p>Metering of steam is done by PPP. Meters are checked and calibrated by a NATA approved agent. Metering is performed by primary (main) and secondary (check/backup) meters.</p> <p>Invoices for metered items are checked by sending and receiving organisations. Other process items are monitored and controlled by the DCS, logged into DAS and reported monthly.</p>				
7.7	Management reports appear adequate for the licensee to monitor licence obligations.	In order to meet all reporting deadlines, PPP has developed a Table of IPM Kwinana License Renewals, Reports Due and Fees and the EMPAC will generate work orders when due.				
<b>8</b>	<b>RISK MANAGEMENT</b>	<table border="0" style="width: 100%;"> <tr> <td style="text-align: right;">Process Rating</td> <td style="background-color: #008000; color: white; text-align: center;">A</td> <td style="text-align: right;">Performance Rating</td> <td style="background-color: #008000; color: white; text-align: center;">1</td> </tr> </table>	Process Rating	A	Performance Rating	1
Process Rating	A	Performance Rating	1			
8.1	Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system.	<p>Risk management is an integral part of the business planning process at PPP.</p> <p>Interviews of KCP's staff and review of documentation confirmed that the risk management plan has been implemented and appear sound and comprehensive, risk registers are maintained, assets risks are analysed and regularly assessed.</p> <p>The Risk Management Framework (RMF) developed by Engie corporate has been adopted for the KCP:</p>				

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)
		<ul style="list-style-type: none"> <li>) the RMF uses processes of hazard identification, risk assessment and acceptance, OPERA (Operational Plant &amp; Environmental Risk Assessment) is used for overall risk management and it includes a risk register;</li> <li>) sighted the “KCP Risk Management Matrix”; this is a standard risk matrix, it includes five levels of consequences in respect of the three criteria, safety, environment and business, and five levels of likelihood of occurrence as per AS/NZS 4360:1999; the Risk Matrix has been applied to risk assessments such as: <ul style="list-style-type: none"> <li>o “KCP Whole of Plant Risk Assessment” which deals mainly with Health and Safety risks, such as noise, heat, lifting, electrical current, rotating equipment; mitigating actions for the 2016 Risk Assessment were highlighted; and</li> <li>o and “KCP Plant Life Extension Assessment.”</li> </ul> </li> </ul>
8.2	Risks are documented in a risk register and treatment plans are actioned and monitored.	<p>The OPERA risk register includes the risks of key components of the power station (about 140 components) and is reviewed every year in accordance with a recurring Work Order. The risk register includes:</p> <ul style="list-style-type: none"> <li>) classes of risk drivers;</li> <li>) frequency and consequences of risk;</li> <li>) level of risk and mitigation;</li> <li>) action plans;</li> </ul> <p>Significant business risks are reported in the corporate risk framework “Enterprise Risk Management (ERM)”. Daily tools support the framework with Job Safety Environment Analysis.</p> <p>Risks and action plans are reviewed regularly at the Monthly Health, Safety and Environment Meetings and Quarterly Compliance Meetings. Incidents and abnormal events are reported regularly in the monthly reports.</p>
8.3	The probability and consequences of asset failure are regularly assessed.	<p>The Whole of Plant Risk Assessment is being reviewed annually (sighted risk assessment in the Strategic Asset Management Plan – June 2016).</p> <p>As per its insurance arrangements with Marsh, the plant is inspected and audited by experts every 2 years to report on its standing in regard to loss prevention. The last audit was carried out by the consulting firm “Global Risk Consultants” (GRC) in November 2015. The audit report included three recommendations. Action has been taken on all of these recommendations.</p>

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)
		The plant has been certified by SAI Global during annual re-certification audits from 2015 to 2017 to Quality Management Systems ISO 9001 with no major non-conformances.
<b>9</b>	<b>CONTINGENCY PLANNING</b>	<div style="display: flex; justify-content: space-between;"> <span>Process Rating <b>A</b></span> <span>Performance Rating <b>1</b></span> </div>
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.	<p>Through discussion with the HSEQ Compliance Advisor and review of documentation, the audit noted:</p> <ul style="list-style-type: none"> <li>) a “Business Continuity Plan” (BCP) (updated September 2016) was sighted and provides the framework for managing contingencies;</li> <li>) the Emergency Response Manual was examined, as well as Emergency Response Procedures;</li> <li>) Reports for annual testing were examined for the years 2014, 2015 and 2016; and</li> <li>) “Disaster Recovery Plan for Kwinana Servers” was examined.</li> </ul> <p>The BCP is set in three time-phased categories which are colour coded for ease of use. The BCP is focused on assisting the Engie management team with the handling of the issues that will arise after an incident has occurred; category of incident determines the category of response.</p> <p>The BCP invokes:</p> <ul style="list-style-type: none"> <li>) an Emergency Response Phase, this covers the initial period following the incident and the immediate actions that need to be carried out;</li> <li>) a Crisis Management Phase, this is activated if the scale of the disruption demands it;</li> <li>) a Business Recovery Phase which focuses on the recovery of lost functions, starting from Management, Finance, Maintenance, Operations;</li> <li>) the BCP includes information on carrying out tests of response plans.</li> </ul> <p>A BCP Test Plan has been created and is included in the BCP. Record of tests and actions were available. The last action was in March 2017</p> <p>Overall the site contingency plans are extensive, appear to be sound and appropriate for the power station operation and are regularly tested.</p>

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
<b>10</b>	<b>FINANCIAL PLANNING</b>	Process Rating	<b>A</b>	Performance Rating	<b>1</b>
10.1	The financial plan states the financial objectives and strategies and actions to achieve the objectives.	The audit has discussed the financial planning with the Business Controller and reviewed PPP's Rolling Four Year Plan to 2021 and confirmed that the financial plans states objectives and strategies and actions to achieve objectives.			
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs.	Financial plans clearly identify sources of funding for capital expenditure and recurrent costs. Ongoing operating and maintenance costs and minor projects are self-funded from the revenue base. Major capital acquisitions and/or major projects can be justified internally, using retained earnings, or alternatively via a line of credit facility using the Facility Agreement.			
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets).	Audit has reviewed PPP's Rolling Four Year Plan 2017 - 2021 and confirmed that the financial plans provide projections of operating statements (profit and loss) and statement of financial position (balance sheets) until 2021.			
10.4	The financial plan provides firm predictions on income for the next five years and reasonable indicative predictions beyond this period.	Audit has reviewed PPP's Rolling Four Year Plan 2017 - 2021 document and confirmed that financial plans provide firm predictions of income and expenditure for the next four years. There is also a 5 year financial budget.			
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services.	Audit has reviewed PPP's Rolling Four Year Plan 2017 - 2021 document and confirmed that financial plans provide for the operations and maintenance, administration and capital expenditure requirements of the services. There is also a 5 year financial budget.			
10.6	Significant variances in actual/budget income and expenses are identified and corrective action taken where necessary.	Audit reviewed the Monthly Management Report for July 2017 and confirmed income and expenses are monitored on a monthly basis at management level. Results for a period are also presented at the PPP meeting that is being held every 2 months. Significant variances in actual/budget income and expenditure are being identified and satisfactorily explained and corrective action implemented accordingly.			
<b>11</b>	<b>CAPITAL EXPENDITURE PLANNING</b>	Process Rating	<b>A</b>	Performance Rating	<b>1</b>

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)
11.1	There is a capital expenditure plan that covers issues to be addressed, actions proposed, responsibilities and dates.	<p>Long term overhaul and capital replacement plans are developed in the preparation of Annual Business Plans and are included in the PPP Strategic Asset Management Plan (SAMP).</p> <p>The Capital Expenditure Plan (CAPEX) is shown in both medium 5 year forecasts and long term forecasts up to 2031.</p> <p>Plant refurbishment and replacements are included in the CAPEX and in the Plant Maintenance Predictions and take place in planned outages. Standard outages require the inspection, replacement or refurbishment of parts such as turbine nozzles, buckets, transition pieces and combustion pass components.</p> <p>The planned capital replacement programme is extensive and appears to adequately cover the operation of the plant.</p>
11.2	The plan provides reasons for capital expenditure and timing of expenditure.	<p>Plant refurbishment and replacement programs are incorporated in planned outages and in the Plant Maintenance Predictions. The programmed maintenance requires the inspection and replacement/refurbishment of parts such as turbine nozzles, buckets, transition pieces and combustion pass components. Provision for the replacement of these components is made in projections, sighted "Plant Life Extension Provisional Capital Projection", the costs are included in the capital expenditure budgets. The projections and allowances appeared adequate and appropriate for the regime of operation of the plant.</p> <p>Capital acquisition procedures are well documented and plans detail reasoning, timing, costs and implementation responsibilities. Audit has sighted the KCP-05-02 Preparation of Annual Business Plan procedure and KCP-06-02 Purchase of Goods &amp; Services Procedure.</p>
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan.	<p>EMPAC is utilised as basis for capital justification. Capital acquisitions/ replenishments are defined using equipment manufacturer recommendations and condition monitoring regime within EMPAC. In addition, a risk assessment is carried out on the entire plant to complement this process.</p> <p>Improvement projects have been continually identified and carried out to increase the performance and efficiency of the plant or increase its life. This was verified by the Loss Prevention Assessors. Capital expenditure projections for 2017 were included in the "Kwinana Cogeneration Plant - Business Plan 2017".</p> <p>Due to the site lease expiring in 2023 there are no imminent projects planned for the Kwinana site for replacement of major plant. If the planned customer-driven 10 year extension occurs, there is provision for the lease to be extended and major overhauls or replacement projects will be considered.</p>
11.4	There is an adequate process to ensure that the capital expenditure plan is regularly updated and actioned.	<p>Audit has discussed the process of review and monitoring of capital expenditure plans with the Business Controller. The capital expenditure plan for the current year is reviewed at each finance meeting generally from April onwards i.e. the full year forecast. The plans for the future years are reviewed in April when PPP is required to resubmit the plans if deemed necessary. Confirmed by review of plans and minutes of meetings.</p>

Item no.	Criteria (refer criteria in Audit Guidelines)	Observations and results (including any potential improvements)			
		Process Rating	A	Performance Rating	1
<b>12</b>	<b>REVIEW OF ASSET MANAGEMENT SYSTEM</b>				
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.	<p>Audit has confirmed that the asset management plans and asset management system described are being reviewed on an annual basis. The Strategic Asset Management Plan was prepared in June 2016.</p> <p>Various plans are reviewed on a monthly, quarterly and yearly basis. PPP's policies and procedures in EMPAC system and regularly reviewed as part of the Internal Audit process performed by the HSEQ Compliance Advisor.</p>			
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system.	<p>The current audit/review period is from 1<sup>st</sup> July 2013 to 30<sup>th</sup> June 2017 inclusive with the report to be provided to ERA by 30 September 2017.</p> <p>The policies and procedures in the EMPAC system and regularly reviewed as part of the Internal Audit process performed by the HSEQ Compliance Advisor. Audit has sighted the Internal Audit Schedule for 2014 to 2017.</p>			



#### **4.4 Conclusion**

The review of the Asset Management System has shown that the system is operating effectively and meeting the expected performance standards under ERA's licence.

The policies, procedures and supporting systems to operate and maintain the system are comprehensively documented, maintained and applied. From review of the plant and the asset management system, the plant is being well-managed and maintained.

The review confirmed that the recommendation from the previous review reported in September 2013 has been implemented.

Continued improvements have been made to the asset management system documentation and the overall maintenance and operation of the plant.

There were no recommendations for corrective action.

**Appendix A: Post-Audit and Post-Review Implementation Plan**

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No.	Issue	Priority (High Medium Low)	Recommendation	Management Response	Person Responsible & Completion Date
	There were no recommendations.				

END OF REPORT