

## Merredin Energy 2014 Performance Audit and Asset Management System Review, Electricity Generation Licence,

### POST AUDIT IMPLEMENTATION PLAN

EIA = Electricity Industry Act 2004  
 EIMC = Electricity Industry (Metering) Code 2012

PERFORMANCE AUDIT							
Oblig No	Lic CI/ Act	Licence Requirement / Rating	Finding	Recommendation	Action	By Whom	Date
106	CI 5.1	Rating B2  <b>Electricity Industry Act section 31(3)</b> 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.	<ul style="list-style-type: none"> <li>The operation of Merredin Power Station is specific, it has been subject to development to fully implement remote operation and existing contingency/ emergency plans need to be reviewed to confirm the suitability to its operation.</li> </ul>	<b>1/2014 (Opportunity for Improvement (OFI))</b> Available Contingency Plans /emergency response documentation should be reviewed and, if applicable, updated, to ensure that it is tailored to the operation of Merredin Energy Pty Ltd (MEPL).	<ul style="list-style-type: none"> <li>Merredin Energy will review and update all contingency and emergency plans on an annual basis. The first review is planned to be completed by 31 March 2015 with annual reviews from then on.</li> <li>The Review Schedule will be incorporated as a task within the TechnologyOne system to ensure that it is automatically flagged up.</li> </ul>	Review by Asset Manager          Loading into TechnologyOne by Administrative Assistant	31 March 2015          15 December 2014
103	CI 20.1	Rating B2  <b>Electricity Industry Act section 14(1)(b)</b> A licensee must notify details of the asset management system and any substantial changes to it to the Authority.	<ul style="list-style-type: none"> <li>The licensee did not advise the Authority details of the asset management system on the required date.</li> </ul>	<b>2/2014</b> The licensee did not advise the Authority details of the asset management system on the required date. The compliance procedures need to be revised to ensure that details and significant changes to the asset management system are notified to the Authority.	<ul style="list-style-type: none"> <li>Compliance procedure to be revised to note that any significant changes in the Asset Management System are to be notified to the Authority</li> </ul>	General Manager Generation	31 December 2014

## POST REVIEW IMPLEMENTATION PLAN

ASSET MANAGEMENT REVIEW							
Item No	EC Ref	Rating / AMS Component Effectiveness Criteria	Asset System Deficiency	Recommendation	Management Action	By Whom	Due Date
1	2.4	A2 Commissioning tests are documented and completed.	<ul style="list-style-type: none"> <li>Some of the Balance of Plant (BOP) commissioning test that were to be completed by the construction contractor were not signed off because of the contractor going into receivership. These tests are being re-run and documented through a warranty claim.</li> </ul>	<b>1/2014</b> Some of the Balance of Plant (BOP) commissioning tests that were to be completed by the construction contractor were not signed off because of the contractor going into receivership. These tests are being re-run and should be documented.	<ul style="list-style-type: none"> <li>Outstanding commissioning tests are currently being undertaken. These are being signed off as they are completed. The work is progressive and is scheduled around various operational and maintenance activities.</li> </ul>	Engineering Manager	31 March 2015
2	3.2	B2 The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken.	<ul style="list-style-type: none"> <li>There have been failures to start-up and synchronise the GTs on start-up. The Review noted that the change in operation was noted in the monthly reports however, while the Merredin Power Station Asset Management System (MPSAMS) for 2014/2015 noted the objective of start up and running on load in accordance with maintenance instructions, the change in operation had not been sufficiently documented in the operational plans.</li> </ul>	<b>2/2014</b> Following the failures to start/synchronise the GTs, the audit noted that the change in operation was noted in the monthly reports and the objective of reliable starts and running on load was noted in the MPS Asset Management System for 2014/2015. The change in operation should be further defined in operational plans.	<ul style="list-style-type: none"> <li>These changes in operation will be incorporated, and any further changes, will be incorporated into the power station operating procedures and the next annual Asset Management Plan.</li> </ul>	Asset Manager	31 December 2014 for most recent changes. Within one month for any future changes.
-	4.4	A2 Achievement of customer service levels.	<ul style="list-style-type: none"> <li>There were a number of instances when the plant was not able to achieve start up as requested by System</li> </ul>	Refer to Recommendation 2.	<ul style="list-style-type: none"> <li>Refer to recommendation 2</li> </ul>		

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			Management as reported under EC 3.2. The issues have been corrected and operational processes changed to improve performance.				
3	5.1	B2 Operational policies and procedures are documented and linked to service levels required.	<ul style="list-style-type: none"> <li>▶ Not all procedures have been issued at present however all of the procedures essential for the current operation of the Asset Management System (AMS) are available.</li> </ul>	<b>3/2014</b> (OFI) Complete the issuing of operational policies and procedures.	<ul style="list-style-type: none"> <li>▶ Merredin Energy intends to have all identified procedures completed within six months. Any further requirement for procedures will be completed as required.</li> </ul>	Asset Manager	31 May 2015
4	5.3	C2 Assets are documented in an Asset Register including asset type, location, material, plans of components, an assessment of assets' physical/structural condition and accounting data.	<ul style="list-style-type: none"> <li>▶ The Asset Register is being progressively compiled and was not in full operation at the time of the review.</li> </ul>	<b>4/2014</b> Complete the implementation of the Asset Register (this work is in progress).	<ul style="list-style-type: none"> <li>▶ Outstanding work to be completed.</li> </ul>	Asset Manager	31 December 2014
5	6.3	B1 Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule.	<ul style="list-style-type: none"> <li>▶ Maintenance plans had been prepared but not fully entered in the Asset Management System (TechOne) in the review period.</li> </ul>	<b>5/2014</b> Complete the upload into the TechOne system and the documentation of the maintenance plans (this activity is in progress).	<ul style="list-style-type: none"> <li>▶ Current maintenance activities are uploaded as work is undertaken.</li> <li>▶ Maintenance plans and workpacks are being prepared for longer interval work prior to tasks being scheduled.</li> <li>▶ Details of tasks done before TechnologyOne was fully implemented are being back loaded to ensure that full history is established.</li> </ul>	Power Station Supervisor	Ongoing.  As maintenance tasks fall due.  31 March 2015
6	6.5	C1 Risk management is applied to	<ul style="list-style-type: none"> <li>▶ At present the maintenance prioritisation process on the</li> </ul>	<b>6/2014</b> Prepare a procedure or provide reference to an existing procedure	<ul style="list-style-type: none"> <li>▶ Develop and document process to effectively tie risk assessment and</li> </ul>	Asset Manager	31 March 2015

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		prioritise maintenance tasks.	basis of risk is reactive and the procedure has not been formalised.	for the prioritisation of maintenance tasks on the basis of risk.	hazard identification to the scheduled maintenance plan. ▶ Develop a procedure to ensure that any identified risks are addressed within the appropriate timeframe.	Power Station Supervisor	
7	7.2	C1 Input controls include appropriate verification and validation of data entered into the system.	▶ While there are processes in place for verification and validation of data entered into the system the processes need to be formalised.	<b>7/2014</b> Document the processes for verification and validation of data entered into the system.	▶ Investigate and develop a procedure to verify and validate all data input to TechnologyOne	Asset Manager	31 March 2015
8	7.3	B1 Logical security access controls appear adequate, such as passwords.	▶ There should be either a reference or more information in the AMS on the policies for computer system access.	<b>8/2014</b> Provide a reference in the asset management system to existing policies or more information on computer system access policies.	▶ Develop a link back to the overall Perth Energy computer access policy	Asset Manager	31 March 2015
9	7.5	B1 Data backup procedures appear adequate and backups are tested.	▶ Information on system back-ups relies on Perth Energy's systems, however there should be reference to the applicable procedures in the asset management system.	<b>9/2014</b> Provide a reference in the asset management system to existing back-up policies/ procedures or more information on system back-ups.	▶ Develop a link back to the Perth Energy computer data back-up systems.	Asset Manager	31 March 2015
10	8.1	B1	▶ While there are documentation	<b>10/2014 (OFI)</b> Provide a reference to	▶ A procedure will be prepared to	Asset Manager	31 March 2015

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		Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system.	<p>and processes addressing risk management such as:</p> <ul style="list-style-type: none"> <li>( policies and process directives in the asset management system;</li> <li>( procedures for risk analysis at PE and</li> <li>( an acceptable process for risk analysis at MEPL which generates documented outcomes,</li> </ul> <p>the MEPL risk analysis process is not fully documented.</p>	existing procedures or document the risk analysis process at MEPL.	document the risk analysis process. This will be tied back to the policies implemented by the Maintenance Contractor.		
11	8.2	B1 Risks are documented in a risk register and treatment plans are actioned and monitored.	<ul style="list-style-type: none"> <li>▶ The MPSAMS notes that a risk register should exist, however the risk register had not been created during the review period.</li> <li>▶ A risk register is not in use.</li> <li>▶ One aspect of the risk analysis process that will require further improvement has to do with the registering of new risks as they arise, which may need immediate treatment and recognition by management at an early stage, this will require the use of a risk register.</li> <li>▶ In addition higher level risks resulting from external factors such as changes in market,</li> </ul>	<b>11/2014</b> Assess whether the risk analysis process covers sufficiently all risks and whether a risk register is required.	▶ Ensure that the risk analysis process is adequately tied into the maintenance scheduling process. This process will cover formal and informal risk assessments, review of forced outage events, updates from original equipment providers and information from third parties.	Asset Manager	30 June 2015

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			operating conditions etc are not readily captured by the asset risk matrix.				
12	9.1	B3 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks.	<ul style="list-style-type: none"> <li>While the use of Perth Energy's contingency plans will be acceptable if they are appropriate to the Merredin Power Station operation, in view of the changing operation of the power station there was not sufficient evidence that appropriate documented plans have been implemented at Merredin.</li> </ul>	<b>12/2014</b> Assess the suitability of existing Contingency Plans and Emergency Responses to the Merredin Power Station operation and proceed with documentation / identification of plans and testing regime.	<ul style="list-style-type: none"> <li>Develop and test contingency plans and emergency response procedures. Tie these into the processes and procedures of the Maintenance Contractor.</li> </ul>	Asset Manager	March 2015
13	12.1	B1 A review process is in place to ensure that the asset management plan and the asset management system described therein are kept current.	<ul style="list-style-type: none"> <li>The AMP has been approved by the required authorities but the draft status has not been removed.</li> </ul>	<b>13/2014</b> Remove draft status from the asset management plan.	<ul style="list-style-type: none"> <li>Finalise 2014-15 Asset Management Plan. Ensure that future plans are finalised</li> </ul>	General Manager Generation	31 December 2014