



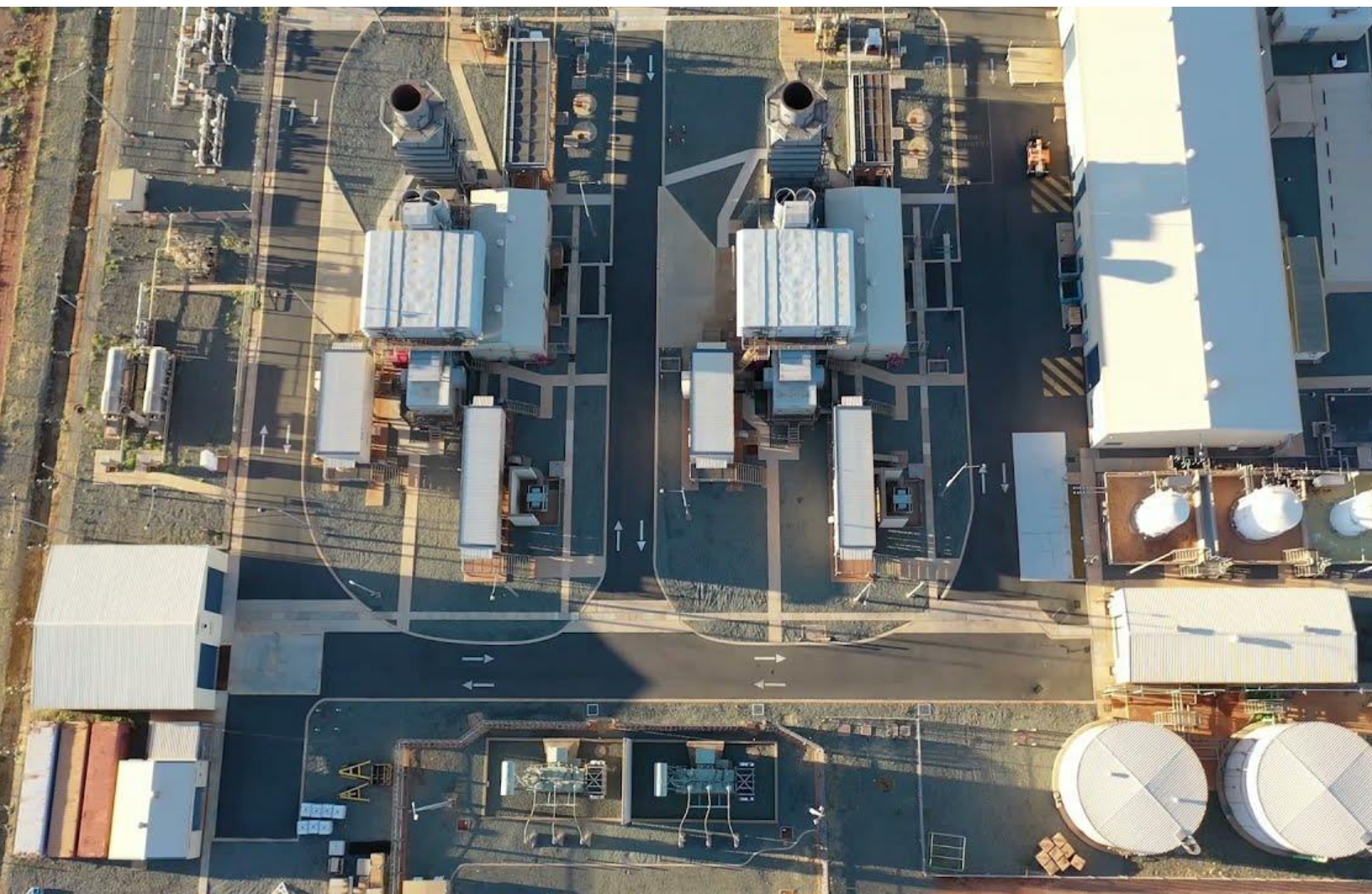
Asset Management System

Review Report

ATCO Power Australia (Karratha) Pty Ltd

October 31, 2023

➔ **The Power of Commitment**



| Project name | | AMS Audit and Review | | | | | |
|-----------------------|-----------------|----------------------|-----------------|------------------|---------------------------|---------------------|-------------|
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Executive Summary

ATCO Power Australia (Karratha) Pty Ltd (APAK) engaged GHD Pty Ltd (referred to hereafter as GHD) to conduct a scheduled review of its asset management system. This review is carried out 5 years after the last review conducted in 2018, covering the period 1 September 2018 to 31 August 2023.

After approval by the ERA of the audit plan, GHD carried out the review, during October 2023 based on the effectiveness criteria as per the ERA 2019 Audit and Review Guidelines.

The review interviews were conducted via in person meetings at APAK's main office. APAK was found to perform effectively against the criteria in the Guidelines. No recommendations were made as APAK did not perform under the threshold for any criterion during the audit period.

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1. Introduction

The Economic Regulation Authority (ERA) is Western Australia's independent economic regulator that is responsible for administering the licensing schemes for gas, electricity and water services. This ensures Western Australian consumers and businesses operate in a fair, competitive and efficient environment.

APAK has an electricity generation license (EGL21). This licence was issued by ERA under section 19 of the Electricity Industry Act 2004 and enables the licensee to generate electricity.

1.1 Overview of ATCO Power Australia (Karratha)

APAK is part of ATCO Group, based in Canada. APAK operates the Karratha Power Station, an 86MW facility that generates electricity to supply residential and business consumers under a long-term power off take contract with Horizon Power.

1.2 Purpose and limitations of this Report

1.2.1 Purpose

Licensees are required to perform a licence performance audit (Audit) and Asset Management System review (Review) contacted by an ERA approved auditor. This report is the Review component.

The scope of the audit report includes performing a limited assurance assessment of the adequacy and effectiveness of performance against the requirements of the licensee. This is conducted by considering:

- a description of the audit or review objectives and the methodology used to conduct the review;
- the period over which the review has been performed;
- details of the licensee's representatives participating in the review;
- details of key documents and other information sources examined by the auditor during the course of the audit; and
- any other information the auditor considers relevant to the audit or review scope of work.

1.3 Scope and limitations

This report: has been prepared by GHD for ATCO Power Australia (Karratha) Pty Ltd and may only be used and relied on by ATCO Power Australia (Karratha) Pty Ltd for the purpose agreed between GHD and ATCO Power Australia (Karratha) Pty Ltd as set out in section 1.2.1 of this report.

GHD otherwise disclaims responsibility to any person other than ATCO Power Australia (Karratha) Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

Accessibility of documents

If this report is required to be accessible in any other format, this can be provided by GHD upon request and at an additional cost if necessary.

GHD has prepared this report on the basis of information provided by APAK and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

2. Objective, Scope and Methodology

2.1 Objectives

The objective of this limited assurance engagement review is to provide to the ERA an independent assessment of the effectiveness of APAK's Asset Management System (AMS) in relation to EGL21 and provide recommendations to address identified non-compliances.

2.2 Scope of Works

This review involves an assessment of the following key areas using a risk-based approach (similar to ISO31000:2009):

- **Process compliance:** Effectiveness of systems and procedures
- **Outcome compliance:** Effectiveness of actual performance against license standards
- **Output compliance:** Effectiveness of records to indicate procedures are maintained
- **Integrity of reporting:** Assessment of the completeness and accuracy of compliance and performance documentation

The scope of this review involves an assessment of against each AMS effectiveness criteria. The review of APAK's AMS covers the following asset management components:

1. Asset planning
2. Asset creation and 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 AMS

2.3 Methodology and Approach

GHD's approach involved working closely with APAK to identify actions and documents as soon as possible before the review report was finalised. This included:

- An initial discussion via teleconference with APAK to:
 - Identify the key processes and roles to be discussed
 - Discuss the review plan
- Preparation of the draft audit plan for comment by the licensee.
- Submission of the draft Audit Plan to the ERA for approval
- A start-up meeting and follow meetings via in person and teleconference with business staff responsible for the audit area and assets. The call involved:
 - Demonstration of key systems
 - Identifying documents to be sampled to confirm procedures and assess compliance with AMS criteria and license obligations
 - Review of procedures
- Preparation of a draft audit report for APAK's review and comment
- Preparation of a final report for submission to the ERA

2.3.1 Deviations from the Audit Plan

There were no deviations from the AMS review plan described in the Audit Plan submitted to the ERA.

3. Review Details

3.1 Previous Review

The previous AMS review conducted in 2018 had listed recommendations against some of the effectiveness criteria. However, these recommendations were given to effectiveness criteria that were rated above the threshold required for a recommendation as per the ERA 2019 Audit and Review Guidelines Section 5.1.8 and are therefore not necessary to have been completed to achieve compliance.

As such, these effectiveness criteria were given a marginal increase in risk to assign suitable priority in the Audit plan to reflect the previous review findings.

3.2 Time Period Covered by the Review

The audit and review cover the period from 1 September 2018 to 31 August 2023.

3.3 Period of the Review Process

The review commenced in October 2023 with the draft Audit Plan issued in September 2023. Interviews with APAK for the review were conducted on 6 October 2023 via in person meeting.

3.4 Details of the Licensee Representatives Participating in the Review

Details of representatives from APAK are tabulated below:

Table 1 Details of Licensee

| Personnel | Organisation |
|-------------------------------------|--------------|
| Senior Quality & Compliance Advisor | APAK |
| Manager of Asset Management | APAK |
| Maintenance Engineer | APAK |

3.5 Details of Key Documents and Other Information Sources

A list of documents reviewed in the audit and AMS review is listed in Appendix A.

3.6 Details of Auditors Participating in the Review

The audit and review team comprised three (3) staff members from GHD.

Details of their roles in the audit/review process are summarised in Table 2.

Table 2 Details of Audit and Review Team Members from GHD

| Name | Role | Summary of Task | Hours Utilised (hrs) |
|--------------|-------------------|--|-----------------------------|
| Henry Le | Auditor/Reviewer | <ul style="list-style-type: none">AMS ReviewPreparation of report | 65 |
| Ben Halligan | Lead AMS Reviewer | <ul style="list-style-type: none">Audit preparationAMS Review | 49 |
| David Seaton | Project Manager | <ul style="list-style-type: none">Project Management | 14 |

4. Performance Summary

Findings of the performance audit are summarised in a table with an adequacy of control and a compliance rating.

4.1 Assessment Rating Scales

In accordance with the 2019 Audit and Review Guidelines, the review of the asset management effectiveness was completed using the rating scales outlined in Table 3 and Table 4.

Table 3 Asset Management Process and Policy Definition Rating

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

Table 4 Performance Rating Scale (Reviews)

| Rating | Description | Criteria |
|--------|----------------------------|--|
| 1 | Performing effectively | <ul style="list-style-type: none"> The performance of the process meets or exceeds the required levels of performance. Process effectiveness is regularly assessed, and corrective action taken where necessary. |
| 2 | Improvement required | <ul style="list-style-type: none"> The performance of the process requires some improvement to meet the required level. Process effectiveness reviews are not performed regularly enough. Recommended process improvements are not implemented. |
| 3 | Corrective action required | <ul style="list-style-type: none"> The performance of the process requires substantial improvement to meet the required level. Process effectiveness reviews are performed irregularly, or not at all. Recommended process improvements are not implemented |
| 4 | Serious action required | <ul style="list-style-type: none"> Process is not performed, or the performance is so poor the process is considered to be ineffective. |

4.2 AMS Review Effectiveness Summary

The AMS review assessed the effectiveness in delivering the services required under the operating license.

The review was conducted using the asset management adequacy and performance ratings as described in Table 3 and Table 4. A summary of outcomes of the review is provided in Table 5.

Table 5 AMS Review Results Summary

| AMS Component | Adequacy Rating | AMS Performance Rating |
|--|-----------------|------------------------|
| 1. Asset Planning | A | 1 |
| Asset management plan covers the processes in this table | A | 1 |
| Planning processes and objectives reflect the needs of all stakeholders and are integrated with business planning | A | 1 |
| Service levels are defined in the asset management plan | A | 1 |
| Non-asset options (e.g. demand management) are considered | A | 1 |
| Lifecycle costs of owning and operating assets are assessed | A | 1 |
| Funding options are evaluated | A | 1 |
| Costs are justified and cost drivers identified | A | 1 |
| Likelihood and consequences of asset failure are predicted | A | 1 |
| Asset management plan is regularly reviewed and updated | A | 1 |
| 2. Asset creation and acquisition | A | 1 |
| Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options | A | 1 |
| Evaluations include all life-cycle costs | A | 1 |
| Projects reflect sound engineering and business decisions | A | 1 |
| Commissioning tests are documented and completed | A | 1 |
| Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood | A | 1 |
| 3. Asset Disposal | A | 1 |
| Under-utilised and under-performing assets are identified as part of a regular systematic review process | A | 1 |
| The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken | A | 1 |
| Disposal alternatives are evaluated | A | 1 |
| There is a replacement strategy for assets | A | 1 |
| 4. Environmental Analysis | A | 1 |
| Opportunities and threats in the Asset Management System environment are assessed | A | 1 |
| Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved | A | 1 |
| Compliance with statutory and regulatory requirements | A | 1 |
| Service standard (customer service levels etc) are measured and achieved. | A | 1 |

| AMS Component | Adequacy Rating | AMS Performance Rating |
|--|-----------------|------------------------|
| 5. Asset operations | A | 1 |
| Operational policies and procedures are documented and linked to service levels required | A | 1 |
| Risk management is applied to prioritise operations tasks | A | 1 |
| Assets are documented in an asset register including asset type, location, material, plans of components, and an assessment of assets' physical/structural condition | A | 1 |
| Accounting data is documented for assets | A | 1 |
| Operational costs are measured and monitored | A | 1 |
| Staff resources are adequate and staff receive training commensurate with their responsibilities | A | 1 |
| 6. Asset maintenance | A | 1 |
| Maintenance policies and procedures are documented and linked to service levels required | A | 1 |
| Regular inspections are undertaken of asset performance and condition | A | 1 |
| Maintenance plans (emergency, corrective, and preventative) are documented and completed on schedule | A | 1 |
| Failures are analysed and operational/maintenance plans adjusted where necessary | A | 1 |
| Risk management is applied to prioritise maintenance tasks | A | 1 |
| Maintenance costs are measured and monitored | A | 1 |
| 7. Asset management information system | A | 1 |
| Adequate system documentation for users and IT operators | A | 1 |
| Input controls include suitable verification and validation of data entered into the system | A | 1 |
| Security access controls appear adequate, such as passwords | A | 1 |
| Physical security access controls appear adequate | A | 1 |
| Data backup procedures appear adequate, and backups are tested | A | 1 |
| Computations for licensee performance reporting are accurate | A | 1 |
| Management reports appear adequate for the licensee to monitor licence obligations | A | 1 |
| Adequate measures to protect asset management data from unauthorised access | A | 1 |
| 8. Risk management | A | 1 |
| Risk management policies and procedures exist and are applied to minimise internal and external risks | A | 1 |
| Risks are documented in a risk register and treatment plans are implemented and monitored | A | 1 |
| Probability and consequences of asset failure are regularly assessed | A | 1 |
| 9. Contingency planning | A | 1 |
| Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks | A | 1 |

| AMS Component | Adequacy Rating | AMS Performance Rating |
|--|-----------------|------------------------|
| 10. Financial planning | A | 1 |
| The financial plan states the financial objectives and identifies strategies and actions to achieve those | A | 1 |
| The financial plan identifies the source of funds for capital expenditure and recurrent costs | A | 1 |
| The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets) | A | 1 |
| The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period | A | 1 |
| The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services | A | 1 |
| Large variances in actual/budget income and expenses are identified and corrective action taken where necessary | B | 1 |
| 11. Capital expenditure planning | A | 1 |
| There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates | A | 1 |
| The capital expenditure plan provides reasons for capital expenditure and timing of expenditure | A | 1 |
| The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan | A | 1 |
| There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented | A | 1 |
| 12. Review of AMS | A | 1 |
| A review process is in place to ensure the asset management plan and the Asset Management System described in it remain current | A | 1 |
| Independent reviews (e.g. internal audit) are performed of the Asset Management System | A | 1 |

5. Observations and Recommendations

5.1 Asset Management System Review

The AMS review conducted is in Table 6. As per the ERA guidelines, recommendations are only given to performance ratings of 3 and 4 or process and policy ratings of C and D.

Table 6 Asset Management Review Observations and Recommendations

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|-----|--|-----------------|--|---------------------------|--------------------|
| 1 | Asset planning Asset planning strategies focuses on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price). | | | A | 1 |
| 1.1 | Asset management plan covers the processes in this table | 2 | The AMP evidences each of the applicable processes with respect the asset planning. See individual effectiveness criteria observations. Also presented is an integrated management system (IMS) manual which serves to document reference guide for all aspects of APAK’s asset management system and planning. | A | 1 |
| 1.2 | Planning processes and objectives reflect the needs of all stakeholders and are integrated with business planning | 4 | APAK has presented an asset management plan (AMP) which includes details their wider asset management planning strategy, including stakeholder analysis. Also presented is a stakeholder needs and expectations document identifies and analyses the needs and expectation and fulfilment criteria for each stakeholder. | A | 1 |
| 1.3 | Service levels are defined in the asset management plan | 4 | Each of the service levels are separated out into categories such as Operational Excellence, HSSE and finance with defined targets for success. | A | 1 |
| 1.4 | Non-asset options (e.g. demand management) are considered | 4 | N/A APAK has no control or bearing on demand from their generation assets. Control over demand is managed by Horizon Power | A | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|-----|---|-----------------|---|---------------------------|--------------------|
| 1.5 | Lifecycle costs of owning and operating assets are assessed | 2 | <p>Life cycle costs of the asset are managed within the financial planning responsibilities APAK's accountants. A long-term financial model has been mapped out for the asset until 2040. Maintenance staff have been directly appointed to interface with APAK's finance sector to track and assess lifecycle costs.</p> <p>An O&M budget spreadsheet has been provided tracks the asset life cycle costs monthly. In addition APAK is using Isograph Availability Workbench (AWB) to track, visualist and analyse key financial data of the asset.</p> <p>SAP is also used to track costs on a per asset basis.</p> <p>Monthly reporting also tracks asset financial intensity of the key and poorly performing assets.</p> | A | 1 |
| 1.6 | Funding options are evaluated | 2 | <p>See item 1.5.</p> <p>Key costs of the asset are operation and maintenance costs rather than capital expenditure.</p> | A | 1 |
| 1.7 | Costs are justified and cost drivers identified | 2 | <p>APAK's business case criteria are aligned with their Gas business procurement policy. A business case document was sighted demonstrating effective business case development procedures with justifications for costs.</p> | A | 1 |
| 1.8 | Likelihood and consequences of asset failure are predicted | 4 | <p>AWB allows for real-time visualisation and continuous tracking of all asset financial data. Asset likelihood and consequence (cost implications) are predicted and reviewed using AWB</p> | A | 1 |
| 1.9 | Asset management plan is regularly reviewed and updated | 2 | <p>Review of the AMP is managed by APAK Document Control. Document Control has systems in place to engage asset management and operations staff to review the AMP on a regular basis (annual). The current revision of the AMP is revision 6, dated 23 June 2023. Regular revisions of the AMP can be seen in its revision history.</p> | A | 1 |
| 2 | <p>Asset creation and acquisition Asset creation/acquisition is the provision or improvement of assets</p> | | | A | 1 |
| 2.1 | Full project evaluations are undertaken for new assets, including comparative assessment of non-asset options | 2 | <p>No new assets have been commissioned during the audit period.</p> <p>The AMP does define the acquisition planning for short, medium and long term for the generation assets beyond 2023.</p> <p>The AMP describes project evaluations undertaken for these future works at a high level. These project evaluations were not assessed as the assets have not been created or acquired during the audit period.</p> <p>See item 1.7</p> | A | 1 |
| 2.2 | Evaluations include all life-cycle costs | 2 | <p>See 2.1</p> <p>AWB was proposed to be used as an evaluation tool to evaluate procurement effects across the entire generation facility</p> | A | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|-----|---|-----------------|---|---------------------------|--------------------|
| 2.3 | Projects reflect sound engineering and business decisions | 2 | APAK will typically outsource via typical EPC contract engagement for engineering projects. An EPC contract has been sighted showing a potential engagement between APAK and an EPC contractor. See 2.1 | A | 1 |
| 2.4 | Commissioning tests are documented and completed | 2 | See 2.1 and 2.3 | A | 1 |
| 2.5 | Ongoing legal / environmental / safety obligations of the asset owner are assigned and understood | 2 | Legal obligations are identified and tracked by APAK using SAI360. In SAI360, obligations are assessed for risk to business and actions/management is assigned to staff. This demonstrates that ongoing legal / environmental / safety obligations are understood and assigned by APAK. In addition, legislative requirements are given an additional priority layer in APAK's asset maintenance system: MEX. | A | 1 |
| 3 | Asset disposal Asset disposal is the consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets. | | | A | 1 |
| 3.1 | Under-utilised and under-performing assets are identified as part of a regular systematic review process | 4 | Asset utilisation and performance is tracked monthly. A sample report was sighted and additional monthly reports were sighted. The reports include a maintenance performance section which actively monitors maintenance intensive assets. MEX is the maintenance system used by APAK to monitor, review and dispatch maintenance activities as required based on scheduling and issues identified by operational or maintenance staff as part of their regular inspections. | A | 1 |
| 3.2 | The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken | 4 | See item 3.1 The monthly report continually tracks and assesses the backlog of maintenance activities and their associated assets. The new OpCom monthly reporting template that has been implemented within the review period also tracks engineering parameters of the assets and gives an overview and assessment of asset performance. Corrective actions taken is also documented in this monthly report. In addition, MEX allows for operator/maintainer initiated corrective actions to be input based on issues identified during regular inspections. | A | 1 |
| 3.3 | Disposal alternatives are evaluated | 2 | APAK has presented their Asset lifecycle Strategy document for their generators and turbines. This document has a section describing their overall strategy for asset disposal. This includes assessment of replacement, remaining useful life and remaining life of contract for the asset components. | A | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|-----|---|-----------------|--|---------------------------|--------------------|
| 3.4 | There is a replacement strategy for assets | 4 | See 3.3 The asset lifecycle strategy outlines an asset specific strategy for each critical asset which would initiate their own dedicated project procedure. | A | 1 |
| 4 | Environmental analysis Environmental analysis examines the Asset Management System environment and assesses all external factors affecting the Asset Management System. | | | A | 1 |
| 4.1 | Opportunities and threats in the Asset Management System environment are assessed | 2 | The AMP includes a SWOT analysis to ensure the management system achieves its objectives and continually improves. In addition, an aspects and impacts register was presented, which gives a risk assessment of the asset management system and presents controls for identified risks. | A | 1 |
| 4.2 | Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved | 2 | The monthly report tracks performance metrics such as availability, failures, maintenance backlog and internal People and culture performance. An emergency response plan was presented and evidence of it being tested was sighted. APAK tests their emergency response plan on a 6 monthly basis. | A | 1 |
| 4.3 | Compliance with statutory and regulatory requirements | 2 | See 2.5 | A | 1 |
| 4.4 | Service standard (customer service levels etc) are measured and achieved. | 1 | See 4.2 The monthly reporting has service standard specific metrics (availability) as well as associated engineering parameters (heat rates, efficiency etc.) are monitored and managed. | A | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|-----|--|-----------------|--|---------------------------|--------------------|
| 5 | Asset operations Asset operations is the day-today running of assets (where the asset is used for its intended purpose). | | | A | 1 |
| 5.1 | Operational policies and procedures are documented and linked to service levels required | 4 | The AMP outlines APAK's operation policy and strategy. The AMP outlines a maintenance management framework which has an emphasis on continual improvement. The stakeholder needs and expectations document includes in their assessment operational policy requirements as part of their stakeholder management strategy. Practices exist for communication with Horizon Remote Control Room and procedures exist for escalation of issues. | A | 1 |
| 5.2 | Risk management is applied to prioritise operations tasks | 2 | APAK has presented their Business Continuity Plan which is their strategy to maintain critical activities and efficient return to normal operations. This plan includes a risk assessment and a section outlining activities based on criticality incident consequence. | A | 1 |
| 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 | 2 | MEX, which is a computerised maintenance management system, acts as APAK's live asset register. An export from MEX into a .csv document was sighted which includes the asset name, associated equipment, asset description, function and condition. | A | 1 |
| 5.4 | Accounting data is documented for assets | 4 | Accounting data for the assets are tracked monthly in an O&M budget spreadsheet. A sample of this monthly sheet was provided and shows accounting data for all assets. All expenditures on a per asset basis is also recorded on SAP is used alongside MEX to manage asset financial information. | A | 1 |
| 5.5 | Operational costs are measured and monitored | 4 | See 5.4 A monthly meeting also takes place to reconcile information between MEX and SAP. | A | 1 |
| 5.6 | Staff resources are adequate and staff receive training commensurate with their responsibilities | 2 | The backlog of work is tracked in the monthly report to monitor adequate staff resourcing. APAK provided a training matrix which outlines the required competencies for staff commensurate with their responsibilities. GHD has also sighted evidence of staff having completed required training. | A | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|-----|--|-----------------|--|---------------------------|--------------------|
| 6 | Asset maintenance Asset maintenance is the upkeep of assets. | | | A | 1 |
| 6.1 | Maintenance policies and procedures are documented and linked to service levels required | 4 | The AMP provides an overview of APAK's maintenance strategy. APAK has also provided their Work Planning document which describes key information on procedure around their planning on maintenance work. Maintenance Procedures used by APAK are held against the appropriate asset. | A | 1 |
| 6.2 | Regular inspections are undertaken of asset performance and condition | 2 | Routine inspections are scheduled, tracked and managed in MEX. Operators and maintainers have their own interface to input data on asset performance and condition. | A | 1 |
| 6.3 | Maintenance plans (emergency, corrective, and preventative) are documented and completed on schedule | 2 | See 6.2 Operators and maintainers are able to schedule required emergency, corrective or preventative activities in MEX. Activities in MEX has a nominated priority and schedule. As discussed in item 4.2 monthly reports also tracks monthly backlog of works to ensure tasks are completed on schedule. | A | 1 |
| 6.4 | Failures are analysed and operational / maintenance plans adjusted where necessary | 2 | See 6.3 Operators and maintainers can schedule unplanned corrective work in MEX. Failures are reported and go through sound failure analysis procedure. An asset failure investigation report has been sighted which includes a root cause analysis, and development of a new maintenance regime as an outcome. | A | 1 |
| 6.5 | Risk management is applied to prioritise maintenance tasks | 4 | Using data from AWB, a Failure modes, effects, and criticality analysis (FMECA) was performed to assess risks and assign priority to maintenance tasks. Critical maintenance tasks are then prioritised in the MEX system. Assets also have criticality flags (such as safety, quality, environment etc.) assigned to them to organise maintenance tasks by priority. | A | 1 |
| 6.6 | Maintenance costs are measured and monitored | 3 | SAP is the per asset financial tracking tool used by APAK. In addition, APAK has provided a monthly O&M budget sample which includes costs of maintenance activities. The monthly reports also includes costs as part of their maintenance performance tracking. | A | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|-----|--|-----------------|--|---------------------------|--------------------|
| 7 | Asset management information system | | | A | 1 |
| | An asset management information system is a combination of processes, data and software supporting the asset management functions. | | | | |
| 7.1 | Adequate system documentation for users and IT operators | 2 | APAK uses EIM as their information system. Internal support for EIM is provided by Document Control within APAK. As part of all APAK staff induction packages, staff are required to complete EIM training with refresher training offered to existing staff as required. | A | 1 |
| 7.2 | Input controls include suitable verification and validation of data entered into the system | 2 | All documents and directories within EIM requires an approval process for changes submitted by staff without the requisite access. | A | 1 |
| 7.3 | Security access controls appear adequate, such as passwords | 2 | All users requires passwords for access to EIM. | A | 1 |
| 7.4 | Physical security access controls appear adequate | 2 | Where operator access rooms are available on site, key card access is required to access the monitoring station. The monitoring station itself requires user login via password. In addition, the facility itself is secured with a security gate with CCTV. | A | 1 |
| 7.5 | Data backup procedures appear adequate, and backups are tested | 3 | MEX is a cloud based software, APAK has provided evidence that they have verified adequate backups with the service provider during the audit period. In addition, APAK has provided their Backup and Retention Practice and provided evidence of successfully performed backups of data during the audit period. | A | 1 |
| 7.6 | Computations for licensee performance reporting are accurate | 4 | Monthly reporting includes detailed service standard metrics such as availability (see 4.2). Currently, there are no reporting requirements for APAK on their licence performance. | A | 1 |
| 7.7 | Management reports appear adequate for the licensee to monitor licence obligations | 4 | APAK has presented a compliance calendar checklist which monitors all of APAK's compliance requirements, including licence obligations. This checklist showed evidence of active monitoring by APAK with appropriate staff on an annual basis. In addition, SAI360 also has a schedule of all obligations and their associated required actions and required timing, this is integrated into the compliance calendar checklist and has been sighted. | A | 1 |
| 7.8 | Adequate measures to protect asset management data from unauthorised access | 4 | APAK has provided their Information Security Practice which details acceptable use of company owned IT equipment and information. This is coupled together with APAK's other security-based policies which have been evidenced. | A | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|-----|--|-----------------|---|---------------------------|--------------------|
| 8 | Risk management | | | A | 1 |
| | Risk management involves the identification of risks and their management within an acceptable level of risk. | | | | |
| 8.1 | Risk management policies and procedures exist and are applied to minimise internal and external risks | 2 | See observations 1.8, 6.5 and 5.2 APAK has also provided their HSE management procedure which defines the APAK HSE risk management process. The document also includes procedures for risk management. | A | 1 |
| 8.2 | Risks are documented in a risk register and treatment plans are implemented and monitored | 2 | APAK provided a live risk register which shows identified risks and controls, this register is actively updated during the audit period. Action tracking from the risk register is done through SAI360. | A | 1 |
| 8.3 | Probability and consequences of asset failure are regularly assessed | 4 | Emerging risks are published internally 3 times a year on a business level, assets that have been identified with high risks are assimilated into the business risk register. See 6.4 and 6.5. Maintenance tasks are prioritised based on a FMECA conducted on asset failure. Asset Operational data is regularly monitored to provide any potential failure or required maintenance insights. | A | 1 |
| 9 | Contingency planning | | | A | 1 |
| | Contingency plans document the steps to deal with the unexpected failure of an asset. | | | | |
| 9.1 | Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks | 2 | APAK has provided their emergency response plan and business continuity plan. The emergency response plan aims to minimise the impact of all credible emergencies which could impact the asset operation, this plan is tested annually. The business continuity plan details the procedure to respond to various modes of unexpected asset failure to maintain critical systems and return to normal operation. The business continuity plan is tested via a desktop and theoretical test annually. | A | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|------|--|-----------------|---|---------------------------|--------------------|
| 10 | Financial planning | | Financial brings together the financial elements of the service delivery to ensure its financial viability over the long term. | A | 1 |
| 10.1 | The financial plan states the financial objectives and identifies strategies and actions to achieve those | 5 | The AMP outlines APAK's financial objectives and lays out the financial targets. The IMS document also lays out APAK's annual planning cycle which allocates May to October of every year to business planning. | A | 1 |
| 10.2 | The financial plan identifies the source of funds for capital expenditure and recurrent costs | 4 | Funding is performed at the company level by the financial department of APAK. Planning for allocation of funds to the asset is integrated into the wider APAK financial planning. The main cost of the asset is recurrent costs of O&M | A | 1 |
| 10.3 | The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets) | 4 | See item 10.2 The AMP has estimated costs which are tracked on a monthly basis via the O&M budget which has been provided. Financial statements, position and cashflows are documented on EIM with internal links to AMP sighted. | A | 1 |
| 10.4 | The financial plan provides firm predictions on income for the next five years and reasonable predictions beyond this period | 4 | Financial forecasts until 2030 years are documented in the current revision of the AMP. Also included are planned investments within the same period. | A | 1 |
| 10.5 | The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services | 4 | O&M costs and planned investments are listed in the financial forecasts in the AMP. | A | 1 |
| 10.6 | Large variances in actual/budget income and expenses are identified and corrective action taken where necessary | 2 | Unplanned events with large implications on budget are actively managed by APAK to ensure recovery of changes in budget and actual income. GHD has sighted documentation of corrective action taken when assessing the risk of scheduling a planned outage with large implications projected budget. | B | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|------|--|-----------------|---|---------------------------|--------------------|
| 11 | Capital expenditure planning The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure for these works over the next five or more years. | | | A | 1 |
| 11.1 | There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates | 2 | See observation 10.1 and 10.4 The AMP also documents the replacement strategy and capital expectation for key assets and reasoning for expected costs. | A | 1 |
| 11.2 | The capital expenditure plan provides reasons for capital expenditure and timing of expenditure | 4 | A capital expenditure request form, which is a supplementary document in the capital expenditure process has been evidenced. See 11.1 | A | 1 |
| 11.3 | The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan | 4 | The AMP is structured to follow the asset lifecycle in documenting assets from acquisition, to operation, maintenance including replacement and capital expectation before disposal. Also provided is their Asset lifecycle Strategy document which documents the replacement strategy for assets. | A | 1 |
| 11.4 | There is an adequate process to ensure the capital expenditure plan is regularly updated and implemented | 2 | See 1.9. The IMS also lays out the framework for continual reviews of the AMP. | A | 1 |
| 12 | Review of AMS The Asset Management System is regularly reviewed and updated. | | | A | 1 |
| 12.1 | A review process is in place to ensure the asset management plan and the Asset Management System described in it remain current | 1 | See 1.9 and 11.4 | A | 1 |

| No. | AMS Effectiveness Criteria | Review Priority | Observations and Recommendations | Process and Policy Rating | Performance Rating |
|------|--|-----------------|--|---------------------------|--------------------|
| 12.2 | Independent reviews (e.g. internal audit) are performed of the Asset Management System | 2 | <p>An internal desktop audit has been conducted on the AMS, evidence of this has been sighted. In addition APAK Group has conducted an internal audit with scope of their review being adjacent to the AMS.</p> <p>Annually, APAK have had multiple engagements to audit their systems during the review period. In some of these audits, scope has been adjacent to the AMS, evidence has been sighted by GHD.</p> <p>APAK has also provided their Auditing & Development of the GBU Audit Schedule which outlines their processes for internal audits for scope including requirements of ERAWA.</p> | A | 1 |

6. Confirmation of the Audit and Review

I confirm that the audit and review carried for APAK on 6 October – 31 October 2023 and recorded in this report is an accurate presentation of our findings and opinions.

Marcel Oosthuizen

GHD Pty Ltd

999 Hay St

Perth 6000

Appendix A

Key Documents Reviewed

Filenames:

(1) AA-HSE-PC04 Health Safety and Environment Practice.pdf
02.3 Emerging Risks - June 2019.docx
02.3 Emerging Risks - Mar 21.docx
23-08 - ATCO Electricity Monthly Report - Aug 2023.docx
23-09 - Report HP-ATCO OpCom (20 September 2023).docx
AA-GOV-FWK-01 Information Management Governance Framework - Signed.pdf
AA-GRC-GL08 Environmental Practice Appendix.docx.pdf
AA-GRC-PL05 Risk Management Framework.docx (2).pdf
AA-GRC-PO04 Risk Management Policy (2).pdf
AA-GRC-PR03 Auditing & Development of the GBU Audit Schedule.pdf
AA-HSE-PC04 Health Safety and Environment Practice (Signed).pdf
AA-HSE-PR42 HSE Risk Management Procedure.pdf
Actuator Inspection Justification - v2.docx
Actuator Inspection Justification.docx
Actuator Maintenance History.xlsx
APA-AMS-GL01 Scope of the Integrated Management System.docx.pdf
APA-AMS-PO01 Asset Management Practice.pdf
APA-AMS-PR01 Working Identification.pdf
APA-AMS-PR02 - Work Planning.pdf
APA-AMS-PR03 - Work Scheduling.pdf
APA-APAK-AMS-GL01_Stakeholder_Needs_and_Expectations_-_APAK.docx.pdf
APA-APAK-AMS-PL01_Asset_Management_Plan_-_APAK.pdf
APA-APAK-AMS-PL02 Asset Lifecycle Strategy - Turbines And Generators – Karratha Power Station.pdf
APA-APAK-GRC-PL01 - Emergency Management Plan Brief – APAK.pdf
APA-APAK-GRC-PL02_Karratha_Power_Station_Business_Continuity_Plan_(BCP) (1).pdf
APA-APAK-HSE-PL01 Emergency Response Plan.pdf
APA-APAK-HSE-PL01-FM01 Cyclone Preparedness Checklist.docx
APA-APAK-HSE-REG-005 APAK Hazard and Risk Register 20 July 2023.xlsx
APA-APAK-HSE-REG-005 APAK Hazard and Risk Register.xlsx
APA-HSE-MA03 Integrated Management System Manual.docx.pdf
APA-HSE-MA03_Integrated_Management_System_Manual.docx.pdf
APAK Snapshot - Compliance Calendar Checks .xlsx
APAK-ENV-PLA-002 Environmental Management System Manual.docx.pdf
APAK-ENV-PLA-002_Environmental_Management_System_Manual.docx.pdf

APAK-ENV-PLA-006 Environmental Management Plan.pdf
APAK-SEC-PRO-001 Security Key & Access Devices.docx.pdf
APAK-WHS-PLA-007 Work Health & Safety Management Plan.pdf
APAK-WHS-REG-001 APAK TRAINING MATRIX.xlsx
APA-WHS-TEM-014 WHSSE Monthly Report.xls
Asset Register.xlsx
AWB Screen Grab.jpg
Emergency Evacuation Debrief_19072023.pdf
Horizon Power Supply Constraint Register.xlsm
Karratha Power Station - O&M Budget.xlsm
Karratha Power Station - O&M Forecast.xlsx
KPS Rolling O&M Forecast - Updated Functionality.xlsx
MEX - Preventive Maintenance Policies.xlsx
MEX - Work Order History (22-09 - 23-09).xlsx
MEX Asset Register.jpg
Obligations module - Electricity Industry Act 2004 - requirements tab.jpg
Obligations module - top level.jpg
PLACEHOLDER FOR - APA-HSE-PR29 Environmental Management and Control Procedure.docx

