KPMG

Asset Management System Review Report

Regional Power Corporation (Horizon Power)
Electricity Integrated Regional Licence (EIRL2)

October 2024
kpmg.com.au

Liang Tay
Risk and Audit Manager
Horizon Power
18 Brodie-Hall Drive
Bentley WA 6102

18 October 2024

Dear Liang,

Horizon Power – Asset Management System Review - 2024

We have completed the Horizon Power Asset Management System Review for the period 1 July 2020 to 30 June 2024 and are pleased to submit to you our limited assurance report, prepared in accordance with the requirements of Australian Standard on Assurance Engagements ASAE 3100 Compliance Engagements (ASAE 3100) for the purpose set out below:

Section 14 of the Electricity Industry Act 2004 (WA) ("the Act") requires Horizon Power to provide the Economic Regulation Authority's ("the Authority") with an Asset Management System (AMS) Review conducted by an independent third party acceptable to the Authority every 24 months (or any longer period that the Authority allows). This report is required by the Electricity Integrated Regional Licence (EIRL2) ("the Licence") issued under Electricity Industry Act 2004 (WA).

I confirm that this report is an accurate presentation of the findings and conclusions from our procedures.

If you have any questions, or wish to discuss anything raised in the report, please contact me on 08 9278 2032.

Yours sincerely

Glenn Diedrich
Partner

KPMG

235 St Georges Terrace

Perth WA 6000

Contents

Abbreviations and Definitions

Abbreviation	Definition
ALARP	As Low As Reasonably Practicable
AMP	Asset Management Plan
AMR	Asset Management Report
AMS	Asset Management System
Authority	Economic Regulation Authority
CAPEX	Capital expenditure
Cherwell	System to manage OT assets
Cintellate	Incident and hazard reporting and management system
CURA	Horizon Power's risk management software
DERM	a technology system that controls and improves the flow of electricity from energy resources, such as solar panels.
Ellipse	Field mobility application used to carry out inspections of distribution assets
EmPowerMe	System to manage training, licences and certification
ENSMS	Electrical Network Safety Management Systems
ERA	Economic Regulation Authority (Regulator)
FAR	Fixed Asset Register
FES	Future Energy Systems
FY	Financial Year
FieldReach	Field mobility application used to carry out inspections of distribution assets
GIS	Geographical Information System
HV	High Voltage
IPP	Independent Power Provider
IRC	Investment Review Committee
IT	Information Technology
JRA	Job Risk Assessment
KPI	Key Performance Indicator
kV	Kilovolt
LV	Low Voltage
MST	Maintenance Scheduled Task
NDT	Non Destructive Test
NFIT	New Facilities Investment Test
NPV	Net Present Value
NWIS	North West Interconnected System
OPEX	Operational Expenditure
OT	Operational Technology
P1	Planned Preventative Maintenance
P2	Planned Corrective Maintenance
PlanView	Portfolio management and work management software
PMM	Project Management Methodology

PowerOn	Mobile – used for mobile switching and fault management Advantage – software to manage high voltage network switching operations
QA	Quality Assurance
R1	Reactive Maintenance (Faults / Breakdowns)
R2	Reactive Corrective Maintenance
RACI	Responsible, Accountable, Consulted, Informed
Regions	Esperance / Goldfields, Gascoyne / Mid-West, Pilbara, Kimberley
RVM	Risk Value Movement
SAIDI	System Average Interruption Duration Index
SAIFI	System Average Interruption Frequency Index
SAP	Strategic Asset Plan
SCADA	Supervisory Control and Data Acquisition
SCI	Statement of Corporate Intent
SLA	Service Level Agreement
SPS	Stand Alone Power System
TMG	Technical Maintenance Guide
WO	Work Order
WM	Work Management

1. Independent Auditor's Report

Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Regional Power Corporation ("Horizon Power") has not complied in all material respects, with the requirements of Section 14 of the Electrical Industry Act 2004 (WA) as evaluated against the criteria set out in Appendix 5 of the Economic Regulation Authority's 2019 Audit and Review Guidelines for the period of 1 July 2020 to 30 June 2024.

Scope

The subject of our limited assurance engagement is whether anything has come to our attention that causes us to believe that Regional Power Corporation ("Horizon Power") has not complied, in all material aspects, with the requirements of Section 14 of the *Electricity Industry Act 2004 (WA)* ("the Act") as evaluated against the criteria set out in Appendix 5 of the Economic Regulation Authority's ("the Authority") 2019 Audit and Review Guidelines ("the Review Guidelines") for the period 1 July 2020 to 30 June 2024 ("the specified period").

Basis of Our Conclusion

We conducted our engagement in accordance with Australian Standard on Assurance Engagements ASAE 3100 Compliance Engagements (ASAE 3100) issued by the Auditing and Assurance Standards Board. We believe that the assurance evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

In accordance with ASAE 3100 we have:

- Used our professional judgement to assess the risks that may cause material non-compliance with the requirements of Section 14 of the Act as evaluated against the criteria set out in Appendix 5 of the Authority's Review Guidelines and to plan and perform the engagement to obtain limited assurance about whether anything has come to our attention that causes us to believe that Horizon Power has not complied, with the requirements of Section 14 of the Act as evaluated against the criteria set out in the Authority's Review Guidelines;
- Considered internal controls implemented to meet the requirements of Section 14 of the Act as evaluated against the criteria set out in Appendix 5 of the Authority's Review Guidelines; however, we do not express a conclusion on their effectiveness; and
- Ensured that the engagement team possess the appropriate knowledge, skills and professional competencies.

Summary of Procedures Performed

In a limited assurance engagement, the assurance practitioner performs procedures, primarily consisting of discussion and enquiries of management and others within the entity, as appropriate, and observation and walk-through and evaluates the evidence obtained. The procedures selected depend on our judgement, including areas where the risk of material non-compliance with the requirements is likely to arise.

Our limited assurance conclusion is based on the evidence obtained from performing the following procedures:

- Utilising the Review Guidelines as a guide for development of a risk assessment and document review to assess controls;
- Development of a Review Plan for approval by the ERA and an associated work program, approved by the ERA on 12 June 2024;
- Interviews with and representations from relevant Horizon Power staff to gain an understanding of process, policy and performance;

- Review of documents and walkthrough of processes and controls to support the assessment of compliance with the requirement to maintain an effective Asset Management System; and
- Physical site visits to Port Hedland and Broome.

The procedures performed in a limited assurance engagement vary in nature and timing and are less in extent that for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Accordingly, we do not express a reasonable assurance opinion on compliance with the Requirements as evaluated against the Review Guidelines.

Inherent Limitations

Because of the inherent limitations of an assurance engagement, together with the internal control structure it is possible that fraud, error, or non-compliance with the requirements of Section 14 of the Act as evaluated against the criteria set out in Appendix 5 of the Authority's Review Guidelines may occur and not be detected.

A limited assurance engagement throughout the specified period does not provide assurance on whether compliance with the Requirements will continue in the future.

Use of this Assurance Report

This report has been prepared for the Directors of Horizon Power and the authority for the purposes set out in the Scope section above and may not be suitable for another purpose. We disclaim any assumption of responsibility for any reliance on this report, to any person other than the Directors of Horizon Power and the Authority, or for any other purpose than that for which it was prepared.

We acknowledge a copy of the report will be provided to the Authority for the purposes of reporting on the performance of the License. We agree that a copy of this report may be provided to the Authority in connection with this purpose, but only on the basis that we accept no duty, liability or responsibility to any party, other than Horizon Power and the Authority in connection with the report or this engagement.

Management's Responsibility

Management is responsible for:

- The compliance activities undertaken to meet the requirements of Section 14 of the Act as evaluated against the criteria set out in Appendix 5 of the Authority's Review Guidelines ("the Requirements");
- Identification of the risks that threaten the Requirements identified above being met and identifying, designing and implementing controls which will mitigate those risks and monitor ongoing compliance.

Our Responsibility

Our responsibility is to perform a limited assurance engagement in relation to Horizon Power's compliance, with the Requirements as evaluated against the Review Guidelines, throughout the period and to issue an assurance report that includes our conclusion.

Our Independence and Quality Management

We have complied with our independence and other relevant ethical requirements of the *Code of Ethics for Professional Accountants (including Independence Standards)* issued by the Australian Professional and Ethical Standards Board and complied with the applicable requirements of Australian Standard on Quality Management to design, implement and operate a system of quality management.

KPMG.

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2. Executive Summary

2.1. Introduction

This document presents the findings emanating from Regional Power Corporation trading as Horizon Power ("Horizon Power") Asset Management System Review ("AMSR") (collectively referred to as "the Review"). The Review has been carried out in accordance with the Audit and Review Guidelines: Electricity and Gas Licences (March 2019).

Horizon Power is a State Government-owned, commercially focused corporation that provides power to about 100,000 residents and 10,000 businesses across regional Western Australia. Horizon Power operates in the Kimberley, Pilbara, Mid-West Gascoyne and Esperance Region with regional offices based in Karratha, Broome, Kununurra, Carnarvon, Esperance and Port Hedland, with corporate support being delivered from Bentley. Horizon Power has a diverse asset portfolio with a total estimated replacement value of over $3,262 million. Seventy-five (75) asset classes are utilised across the areas of distribution, transmission and generation[1].

Since the last AMSR was undertaken in 2020, no significant changes to the asset portfolio base have occurred. A notable change that occurred during the Review period however was the introduction of the Electricity Industry (Pilbara Networks) Regulations (2021).

The Review was undertaken in accordance with the Review Plan that was presented and approved by the Authority on 12 June 2024.

This document does not change the scope or conclusion reached in our attached Independent Auditor's Report.

2.2. Objectives

The Review was conducted to assist Horizon Power in meeting the requirements of Section 14 of the Electricity Industry Act 2004 (WA) ("the Act") as evaluated against the criteria set out in Appendix 5 of the Economic Regulation Authority's ("the Authority") 2019 Audit and Review Guidelines ("the Review Guidelines") for the period 1 July 2020 to 30 June 2024 ("the specified period") ("the compliance requirements").

Section 14 of the *Act* requires Horizon Power to provide to the Economic Regulation Authority an Asset management System (AMS) Review conducted by an independent expert acceptable to the ERA not less than once in every 24-month period (or any longer period that the ERA allows).

The Review covered the period 1 July 2020 to 30 June 2024.

2.3. Limited assurance Engagement

The Review was conducted and reported as a limited assurance engagement in accordance with Australian Standard on Assurance Engagements ASAE 3100 Compliance Engagements (ASAE 3100).

Our responsibilities

KPMG's responsibility was to perform a limited assurance engagement in relation to Horizon Power's compliance with the requirements of Section 14 of the *Electricity Industry Act 2004* (the Requirements) as evaluated against the criteria set out in Appendix 5 of the Economic Regulation Authority's 2019 Audit and Review Guidelines (the Criteria) for the period 1 July 2020 to 30 June 2024.

Applicable assurance standard

We conduct our engagement in accordance with ASAE 3100. The ASAE 3100 requirements are outlined below.

- We used our professional judgement to assess the risk of Horizon Power not meeting the Requirements and plan and perform the engagement to obtain limited assurance that we are not

[1] Noting that generation assets are excluded from the scope of this review.

aware of any instances where the Requirements have not been met as evaluated against the Criteria for the period 1 July 2020 to 30 June 2024.

- We will consider relevant internal controls when designing our assurance procedures, however we do not express a conclusion on their effectiveness.
- The KPMG team will possess the appropriate knowledge, skills and professional competencies.

Our engagement is not designed to and will not necessarily disclose all irregularities, errors or fraud related to the compliance requirements, should any exist. However, we will inform you of any such matters that come to our attention.

Limited assurance and material misstatement

The procedures performed in a limited assurance engagement vary in nature and timing from and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Inherent limitations in assurance engagements

Because of the inherent limitations of an assurance engagement, together with the internal control structure it is possible that fraud, error, or non-compliance with the Requirements may occur and not be detected.

A limited assurance engagement throughout the specified period does not provide assurance on whether compliance with the Requirements will continue in the future.

2.4. Scope

This limited assurance engagement was undertaken in order to report whether, based on the work performed, anything has come to our attention to indicate that Horizon Power has not complied in all material respects, with the requirements of Section 14 of the Electricity Industry Act 2004 as evaluated against the criteria set out in the Economic Regulation Authority's 2019 Audit and Review Guidelines for the period 1 July 2020 to 30 June 2024. The scope required an assessment of the adequacy and effectiveness of Horizon Power's AMS for the period by evaluating the components of twelve asset management processes below and the effectiveness criteria outlined in Appendix 5 of the Economic Regulation Authority's 2019 Audit and Review Guidelines:

Key Asset Management Processes	
Asset Planning	Asset management information systems
Asset creation / acquisition	Risk management
Asset disposal	Contingency planning
Environmental analysis	Financial planning
Asset operations	Capital expenditure planning
Asset maintenance	Review of the asset management system

Exclusion

The scope of this Review includes assets subject to the licence. We are advised by Horizon Power that the following exclusions apply:

- Generation Assets – based on EIRL2, Horizon Power's in-house generation does not meet the installed capacity requirement of the licence (40.604 MW) and so will not be in scope; and
- Remote Communities – given Remote Communities are currently exempt from EIRL2, these communities will not be subject to the conditions of the licence including in relation to asset management auditing requirements under section 14(1)(c) of the Act and will not be in scope.

Site visits

Two (2) regional sites were visited to inform the findings, Port Hedland and Broome. The sites were selected based on a preliminary risk assessment taking into consideration historical AMSR site visits, and the strategic importance of the locations to Horizon Power's operations.

2.5. Approach

In developing the Review Plan, KPMG adopted a risk based approach, consistent with the ERA's methodology for assessing risk per the Guidelines. The supporting tables to this risk based approach are shown at Appendix 2.

We note the Authority has defined the following areas of special focus for this Review:

Process	Asset management effectiveness criteria
Asset operations	5.3 – Assets are documented in an asset register including asset type, location, material, plans of components and an assessment of asset's physical/ structural condition.
Asset maintenance	6.3 – Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule
Contingency planning	9.1 – Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks

The criteria listed above will be given a Priority Rate of "2" for this Review Period.

Risk based approach.

The initial step involved a high level risk assessment of the AMS to analyse and verify the priority ratings for each of the 58 AMS elements. This assessment allowed KPMG to determine the higher risk areas of Horizon Power's asset management system. Higher risk areas were prioritised to ensure appropriate assurance coverage was applied.

Firstly, KPMG identified the potential consequences, should Horizon Power not maintain an effective asset management system for assets subject to its License. Consequences were reviewed using a 3-point rating scale described in the Electricity Compliance Reporting Manual (2023).

The likelihood of Horizon Power not maintaining their asset management system for assets subject to its License was then assessed using the likelihood ratings. Likelihood was reviewed using a 3-point rating scale described in the Electricity Compliance Reporting Manual (2023). The consequence and likelihood assessment then provided overall inherent risk ratings for each element of the AMS system.

Next the strength of the existing internal controls that may mitigate the inherent risks was assessed. Controls were assessed as weak, moderate or strong.

KPMG reviewed actions undertaken by Horizon Power during the review period to determine if any of the control adequacy ratings should be amended. A number of documents have been supplied by Horizon Power to assist in this assessment including:

- Internal asset management audits undertaken during the review period;
- Internal risk reviews undertaken or updated during the review period;
- Network Quality and Reliability of Supply 2023 Code Report;
- Follow up to Project Assets Internal Audit Report; and
- Compliance of Monitoring Systems Audit Report 2020.

The outcomes from this activity created a Priority Rating for each element of the AMS as outlined in Table 1.

Priority ratings

The detailed risk assessment for each effectiveness criteria element and priority ratings is attached in **Appendix 4** and summarised in Table 1 below.

Table 1: Summary of Review Priority Ratings

Asset Management Process	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5
Asset planning	0	1	0	4	4

Asset creation / acquisition	0	2	0	3	0
Asset disposal	0	0	0	1	3
Environmental analysis	0	0	0	4	0
Asset operations	0	3	0	3	0
Asset maintenance	0	5	0	1	0
Asset management information system	0	3	0	2	3
Risk management	0	2	0	1	0
Contingency planning	0	1	0	0	0
Financial planning	0	0	0	2	4
Capital expenditure planning	0	0	0	3	1
Review of the asset management system	0	0	0	0	2
TOTAL	**0**	**17**	**0**	**24**	**17**

2.6. Execution of the Review Plan

The Review Plan inclusive of the risk assessment priority ratings and proposed review procedures was submitted to the Authority and subsequently approved on 12 June 2024.

There were no deviations from the Review Plan in executing the fieldwork.

Based on the Review priority identified for each effectiveness criteria element we carried out specific assurance procedures in order to obtain sufficient and appropriate evidence. In selecting the assurance procedures, we will use our judgment and assessment of the level of risk involved having regard to the example procedures below.

Table 2: Examples of possible procedures, per the 2019 Audit and Review Guidelines issued by the Authority

Review Priority		Examples of review procedures
1	High Priority	Interview supervisory and operational personnel Inspect relevant documents Obtain evidence policies, procedures and controls are in place and working effectively Examine compliance reports and breach register Obtain confirmations from third parties if applicable Examine reports and correspondence with other regulators (e.g. Building and Energy) Inspect applicable asset infrastructure Examine asset management system effectiveness criteria Sample, at a high level, output and timeliness procedures
2		
3	Moderate Priority	Interview supervisory and operational personnel Inspect relevant documents Obtain evidence policies, procedures and controls are in place and controls are working effectively Examine compliance reports and breach register Physically examine applicable asset infrastructure Examine asset management system effectiveness criteria
4		

5	Low Priority	Interview supervisory or operational personnel Undertake a desktop review of relevant documents Undertake a desktop review of policies, procedures and controls in place View compliance reports and breach register Visit applicable asset infrastructure Undertake a desktop review of asset management system effectiveness criteria Sample, at a low level, output and timeliness procedures

A list of the licensee's representatives who participated in the Review is provided in Appendix 1.

A list of key documents and other information sources examined during the course of the Review is provided in Appendix 2.

2.7. Summary of action for previous review recommendations

There were no resulting formal recommendations to be actioned from Horizon Power's 2020 Asset Management System Report.

2.8. Review team members and time undertaken to complete review

The following table outlines the personnel who undertook the review and time taken to complete the review procedures.

Fieldwork commenced on 17 June 2024 and was completed on 22 July 2024.

Fieldwork at the Port Hedland Depot was conducted on 8 July - 10 July and the Broome Depot fieldwork was conducted on 15 July – 17 July 2024.

Table 3: Review Members and Hours

Review Members	Hours
Glenn Diedrich, Engagement Partner	16
Matthew Spano, Engagement Lead	87
Ken Holder, Electrical Engineering Subject Matter Exert	29
Neil Graham, Engagement Manager	37
Therese Brooks, Delivery Leader	178
Abrar Prottoy, Delivery Support	166
TOTAL	**513**

2.9. Summary of outcomes from current review

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that Horizon Power has not complied with the requirements of Section 14 of the Electricity Industry Act 2004 as evaluated against the criteria set out in Appendix 5 of the Economic Regulation Authority's 2019 Audit and Review Guidelines.

In conducting the 2024 Asset Management System Review, we observed that Horizon Power maintains a uniform approach to asset management throughout the organisation, demonstrating a robust alignment between their processes and practises. Their commitment to continuous improvement is evident, and their staff exhibits a proactive and positive culture towards reporting. The team's initiative was demonstrated through their extensive preparation of policy and procedural documentation and their prompt responses to all data requests.

We note that we have seen a number of changes to the priority ratings since the last review. Where priority has increased, this has been predominantly in response to the Security of Critical Infrastructure (SOCI) legislation and was applied to specific elements in the asset management information system criterion. Priorities were decreased when Horizon Power was able to demonstrate improved control adequacy.

We have also noted that the results of this audit are an improvement on the results achieved in the 2020 AMSR. This is due to a number of continuous improvement initiatives that Horizon Power undertook during the review period and include the introduction of a integrated resource planning function, updating key planning and delivery documentation (Asset Class Strategies and the Project Management Methodology framework), improvements to the AMR including both KPIs and reporting mechanisms, implementation of new governance and review mechanisms including the Investment Review Committee, a LiDAR survey that provided additional asset condition data and validated geolocation asset data, development of standard commissioning report templates, and creation of new roles to improvement management of the organisation's assets. All asset projects are now consistently managed through the PlanView system which has provided improved central oversight. The positive culture and disciplined approach to best practice was a notable observation and the high score achieved reflects this.

Another notable changes that has occurred during the Review period are the introduction of the Pilbara Network Access Code 2021 and the New Facilities Investment Test (NFIT), which stipulates additional rigor in the justification of business case submissions.

We also note that Horizon Power is currently working on implementing SmartWorks, a new system that digitises asset management and works management business processes and is intended to drive consistency and improve data capture. Horizon Power intends to use this new system's functionality to further evolve its asset management capability and focus on making data driven decisions. Some of the intended benefits include the further improvement of Maintenance Scheduled Tasks (MSTs) governance, improved reporting on asset/system performance, and improved interface for end users.

In accordance with the ERA 2019 Audit and Review Guidelines, no formal recommendations have been raised during the Review as there were no instances where asset management processes and policy or performance were rated C or D (process and policy rating) or 3 or 4 (performance rating).

3. Performance summary

The overall effectiveness rating for each asset management process is based on the combination of the process and policy adequacy rating and the performance rating, as defined in Table 4 and Table 5.

Table 4: Asset management process and policy definition adequacy ratings

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

Table 5: Asset management performance ratings

Rating	Description	Criteria
1	Performing effectively	The performance of the process meets or exceeds the required levels of performance. Process effectiveness is regularly assessed, and corrective action taken where necessary.
2	Opportunity for improvement	The performance of the process requires some improvement to meet the required level. Process effectiveness reviews are not performed regularly enough. Process improvement opportunities are not actioned.

3	Corrective action required	The performance of the process requires significant improvement to meet the required level. Process effectiveness reviews are performed irregularly, or not at all. Process improvement opportunities are not actioned.
4	Serious action required	Process is not performed, or the performance is so poor that the process is considered ineffective.

Table 6 summarises KPMG's assessment of each of the twelve key asset management processes together with the effectiveness criteria for each key component.

Table 6 Asset management system effectiveness summary

Asset management process & effectiveness criteria	Process and policy rating	Performance Rating
1. Asset Planning	**A**	**1**
1.1 Asset management plan covers the processes in this table	A	1
1.2 Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning	A	1
1.3 Service levels are defined in the asset management plan	A	1
1.4 Non-asset options (e.g. demand management) are considered	A	1
1.5 Lifecycle costs of owning and operating assets are assessed	A	1
1.6 Funding options are evaluated	A	1
1.7 Costs are justified and cost drivers identified	A	1
1.8 Likelihood and consequences of asset failure are predicted	A	1
1.9 Asset management plan is regularly reviewed and updated	A	1
2. Asset Creation and Acquisition	**A**	**1**
2.1 Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions	B	1
2.2 Evaluations include all life-cycle costs	A	1
2.3 Projects reflect sound engineering and business decisions	A	1
2.4 Commissioning tests are documented and completed	A	1
2.5 Ongoing legal/environmental/ safety obligations of the asset owner are assigned and understood	A	1
3. Asset Disposal	**A**	**1**
3.1 Under-utilised and under-performing assets are identified as part of a regular systematic review process	A	1
3.2 The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken	A	1
3.3 Disposal alternatives are evaluated	A	1
3.4 There is a replacement strategy for assets	A	1
4. Environmental Analysis	**A**	**1**
4.1 Opportunities and threats in the asset management system environment are assessed	A	1
4.2 Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved	A	1

4.3 Compliance with statutory and regulatory requirements	A	1
4.4 Service standard (customer service levels etc) are measured and achieved	A	1
5. Asset Operations	**A**	**1**
5.1 Operational policies and procedures are documented and linked to service levels required	A	1
5.2 Risk management is applied to prioritise operations	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	A	1
5.4 Accounting data is documented for assets	A	1
5.5 Operational costs are measured and monitored	A	1
5.6 Staff resources are adequate and staff receive training commensurate with their responsibilities	A	1
6. Asset Maintenance	**A**	**1**
6.1 Maintenance policies and procedures are documented and linked to service levels required	A	1
6.2 Regular inspections are undertaken of asset performance and condition	A	1
6.3 Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule	B	1
6.4 Failures are analysed and operational/maintenance plans adjusted where necessary	A	1
6.5 Risk management is applied to prioritise maintenance tasks	A	1
6.6 Maintenance costs are measured and monitored	A	1
7. Asset Management Information System	**A**	**1**
7.1 Adequate system documentation for users and IT operators	A	1
7.2 Input controls include appropriate verification and validation of data entered into the system	A	1
7.3 Security access controls appear adequate, such as passwords	A	1
7.4 Physical security access controls appear adequate	A	1
7.5 Data backup procedures appear adequate and backups are tested	A	1
7.6 Computations for licensee performance reporting are accurate	A	1
7.7 Management reports appear adequate for the licensee to monitor license obligations	A	1
7.8 Adequate measures to protect asset management data from unauthorised access or theft by persons outside the organisation	A	1
8. Risk Management	**A**	**1**
8.1 Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system	A	1
8.2 Risks are documented in a risk register and treatment plans are implemented and monitored	A	1

8.3 Probability and consequences of asset failure are regularly assessed	A	1
9. Contingency Planning	**A**	**1**
9.1 Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks	A	1
10. Financial Planning	**A**	**1**
10.1 The financial plan states the financial objectives and strategies and actions to achieve the objectives	A	1
10.2 The financial plan identifies the source of funds for capital expenditure and recurrent costs	A	1
10.3 The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	A	1
10.4 The financial plan provides firm predictions on income for the next five years and reasonable indicative predictions beyond this period	A	1
10.5 The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	A	1
10.6 Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	A	1
11. Capital Expenditure Planning	**A**	**1**
11.1 There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates	A	1
11.2 The capital expenditure plan provides reasons for capital expenditure and timing of expenditure	A	1
11.3 The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	A	1
11.4 There is an adequate process to ensure that the capital expenditure plan is regularly updated and actioned	A	1
12. Review of AMS	**A**	**1**
12.1 A review process is in place to ensure that the asset management plan and the asset management system described in it remain current	A	1
12.2 Independent reviews (e.g. internal audit) are performed of the asset management system	A	1

4. Observations – Asset Management Review Details

The observations, recommendations, opportunities for improvement, and overall level of effectiveness in relation to each key process area is provided in Section 4.1 to 4.12. In the detailed observations, each effectiveness criteria's priority is colour-coded to indicate its rating, with pink representing higher ratings and green indicating lower ratings. Based on the Review priority identified for each effectiveness criteria element, specific assurance procedures were carried out in order to obtain sufficient and appropriate evidence.

4.1. Asset Planning

Key Process	Asset planning strategies focus on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price)
Outcome:	Asset planning is integrated into operational or business plans with established framework for existing and new assets to be effectively utilised and their services optimised.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations	
1.1	Asset management plan covers the processes in this table	4	Through enquiries held with the Senior Manager Asset Services and review of the Asset Management Policy, Strategy, Strategic Asset Plan and Region specific Opex & Capex plans managed through the PlanView system, we note that Horizon Power has: • Introduced revised AM Policy and Strategy and introduced a new AMS Framework Description document. • Revised the content and focus of the Strategic Asset Plan to include more specific AM Objectives and introduced a new process to review these annually. • Revised and consolidated the format for their asset class strategies to a distilled, concise and relevant technical document, with revised and updated KPIs. • Introduced a 10-year rolling Asset Management Plan that has significantly improved their forward planning ability and allows for flexibility in year-to-year changes, thus ensuring that any changes to the risk profile can be more effectively managed. Together, the suite of documentation provides some direction on the licensee's asset management framework and practices, including an overview of the asset portfolio and planned future investment, supported by risk-based rationale through the Risk Value Movement (RVM) process.	
			Process and Policy Rating: A	Performance Rating: 1
1.2	Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning	5	Through enquiries held with the Senior Manager Asset Services, Senior Manager Future Energy Systems, Acting Executive GM Business Development & Strategy and review of the asset management planning processes, we note that: • The AMP process is iterative and involves several stakeholder reviews both internally and externally. Business cases are independently reviewed by the Horizon Power's Investment Review Committee prior to executive decision to ensure that projects reflect stakeholder needs and align to business objectives. The customer and regulatory objectives are reflected through the asset management KPIs. • The Delegation of Authority clearly defines decision making responsibilities, ensuring stakeholder concerns are addressed efficiently.	

			• Integrated resource planning (IRP) has been implemented successfully during the review period in Exmouth. IRP is a public process where Horizon Power works with communities and stakeholders to explore energy options to shape the future energy system. The IRP process puts engagement with communities at the forefront of delivering major power infrastructure and customer products to ensure solutions are better aligned with the unique characteristics and interests of every community. Community engagement and consultation in Exmouth started in October 2020 which involved extensive community stakeholder engagement to test a number of energy solutions including microgrid, solar, battery, backup generation. Horizon Power used the community feedback in a number of ways including the generation solutions we assessed, the amount of renewable energy in the system, the location of the infrastructure in assessing land options as well as the potential customer products that could be offered. Horizon Power also surveys residential and business customers on an annual basis to monitor the organisations performance across each region. This Annual Brand Reputation and Customer Satisfaction survey help Horizon Power understand their customer concerns better and provide customers with an opportunity to have their say about how they use electricity and which services matter most to them.	
			Process and Policy Rating: A	Performance Rating: 1

1.3	Service levels are defined in the asset management plan	5	Through enquiries held with the Senior Manager Asset Services, Asset Systems Manager and review of the relevant documentation, we note that:
			• The Asset Management Strategy 2023-2028 outlines asset services levels and these are further detailed in the Strategic Asset Plan (SAP). The SAP identifies the performance objectives and targets for Horizon Power's assets against the following key performance areas:
			  ○ Safety (public and employee / contractor)
			  ○ Regulatory compliance
			  ○ Capacity
			  ○ Reliability
			  ○ Quality of service
			  ○ Economics
			  ○ Asset Service
			• Performance against internal and regulatory defined service levels and key performance metrics are tracked via the monthly Asset Management Reports.	

			Process and Policy Rating: A	Performance Rating: 1
1.4	Non-asset options (e.g. demand management) are considered	5	Through enquiries held with the Senior Asset Services Delivery Manager, Program & Portfolio Management Director, Acting Senior Manager Future Energy Systems and review of the templates and guidance documentation we noted that: • The Asset Management Guideline Module 2: Project Evaluation details the requirements of asset creation and acquisition at the options assessment stage. A minimum of two alternative options should be considered (in addition to the 'do nothing' baseline option). In this options evaluation stage, demand side options should be	

			included if they are available. The guidance document provides examples of these demand management solutions that could include (e.g.) establishing a contract with a local company to reduce high load consumption during system' peak demand times to keep network capacity within acceptable operating bounds. • The Senior Manager Future Energy Systems noted that 'studies risk assessment' are undertaken to inform forward planning for study areas. Input from key stakeholders the key issues and risks are mapped, and available solutions identified. At this point non-asset / demand management solutions will be identified and considered. • We note that a non-asset-based solution was considered in Port Hedland to address a customer request for a new connection. The connection would put the feeder line at risk of exceeding the load limits. A demand study was undertaken for both the McKay transformer and the Witnell Transformer. Decision was made to change the open points so the client could be connected, the current system could be better utilised, and no significant new infrastructure needs to be installed.
			Process and Policy Rating: A / Performance Rating: 1
1.5	Lifecycle costs of owning and operating assets are assessed	4	Through enquiries held with the Asset Services Delivery Manager, PMO Manager and consideration of Horizon Power's asset management framework, system, policies and processes, we determined that: • Asset Class Strategies integrate an assessment of lifecycle costs associated with owning and operating each key asset class, with recommended maintenance and renewal interventions developed to enable the organisation to achieve the highest value return from each asset investment. This is typically administered through Ellipse based on Maintenance Scheduled Tasks and commissioned assets and is automatically updated based on asset status (e.g. commissioned or decommissioned). • The business case templates for new asset investments require that each proposed project include NPV and IRR calculations for lifecycle costs. Business Cases for major capital projects (>$5M) are independently reviewed by the Investment Review Committee to ensure due diligence is applied to all major capital expenditure. • The Risk Value Movement (RVM) assessment adopts Horizon Powers enterprise risk framework and is applied to all proposed AMP projects and programs and considers lifecycle costs as well as applying a financial assessment to the risk exposure of the current state compared to the future state should the project be funded. • We reviewed the business case to update streetlights in Karratha to LEDs and note that business case assessed and compared the lifecycle costs including operation, maintenance and disposal costs.
			Process and Policy Rating: A / Performance Rating: 1
1.6	Funding options are evaluated	5	Through enquiries held with the Senior Manager Asset Service and the Financial Analytics & Performance Lead, and an assessment of Horizon Power's asset planning processes, we note that: • The Asset Management team develops an overall list of projects. • The finance team then assesses and identifies the appropriate funding method. The standard funding options considered include: ○ Internal funds / dividends

			○ Department of Treasury allocations (annual and mid-year allocations) ○ Government grants and subsidies ○ Customer funding Where a significant event such as a cyclone triggers the need for additional maintenance and capital costs, a submission will be made to treasury for relief funding outside normal funding channels.
			Process and Policy Rating: A — Performance Rating: 1
1.7	Costs are justified and cost drivers identified	4	Through enquiries held with the Senior Manager Asset Services, the Financial Analytics & Performance Lead and consideration of Horizon Power's asset planning processes, we note that: • Horizon Power asset management drivers are identified in the Asset Management Strategy. These key drivers are linked to both Horizon Power's objectives and drivers, and the asset management performance objectives. • All Business Cases are required to demonstrate their link to both Horizon Powers goals and objectives and treasury business cases also need to demonstrate alignment to WA Governments goals and objectives. • AMP projects and programs are evaluated using the Risk Value Movement (RVM), a calculation described in the Risk for Asset and Projects Framework that assess the costs associated with moving from the current risk value to the target risk value by implementing the proposed project. • The Asset Management Report (AMR) capture details on costs involved in owning and operating the assets, which are discussed and reviewed monthly. Any anomalies identified through this process are investigated. • The document titled AMP Guidance Module No 2 Project Evaluation details how costs are justified, and cost drivers identified. It also details the New Facilities Investment Test (NFIT) that is now applied to the Pilbara system. This arrangement impacts the Pilbara, common services (IT, OT & Corporate) where spending will impact the Pilbara cost base. Justification for capital works will need to comply with the NFIT. To comply with this test, the proposed capital works justification is to be based on: ○ the incremental revenue recovers the cost of new facilities investment; or ○ provides a net benefit to those who generate, transport and consume electricity; or ○ necessary to maintain the safety or reliability of the network or its ability to provide contracted covered services. Currently in PlanView there is a project justification section that in mandatory for the Pilbara region and optional for all other regions. In the future Horizon Power plans to make this additional project justification section mandatory across the whole business. The review team examined the mandatory and optional project justification inputs in the PlanView system.
			Process and Policy Rating: A — Performance Rating: 1
1.8	Likelihood and consequences of asset failure are predicted	2	Through enquiries including those with the Senior Manager Asset Services and Systems Performance Manager; an examination of relevant risk assessment and asset planning documentation, and walkthrough of Horizon Power's processes for predicting the likelihood and consequence of asset failure, we note that: • Horizon Power's Risk Management Policy includes their risk appetite statement indicating that the Board will accept a medium residual risk rating for identified risks. The statement also notes that where the exposure

			relates to safety risks, Horizon Power requires demonstration that exposure is reduced to the more conservative of the following: As Low As Reasonably Practicable (ALARP) or good industry practice.
			• Likelihood and consequences of asset failure are assessed according to the As Low As Reasonably Practicable (ALARP) principle, utilising Horizon Power's Corporate risk tables.
			• The Asset Class Strategies address the overall risks associated with a specific asset class. The asset class strategies will identify key failure modes and their likelihoods, as well as an overall failure rate per annum. The failure modes and rates are based on historical data. The asset class strategies are reviewed every 5 years to incorporate recent trends, although a review may be triggered where (e.g.) a novel systemic asset failure is identified. Asset service life expectations and replacement strategies are informed by assessment of likelihood and consequence of asset failure.
			• Guidance documents including the Distribution Assets Condition Assessment Guide provide detailed descriptions and accompanying photographs to help crew categorise faults and conditions for all key assets across the network. The condition categories have been developed based on the likelihood and consequence of failure, along with standard timeframes to address identified condition issues.
			• Safety risks relating to asset failure are captured, assessed and managed in Operating Division risk registers, with mitigation actions tracked. Samples of these risk registers were examined by the review team.
			• We observed destructive testing and non-destructive testing documentation.
			• All proposed AMP projects and programs across the state are compared using the Risk Value Movement (RVM) calculation. This value attributes a financial benefit to the organisation that is derived from the risk, likelihood and probable consequence to the business.
			• System Performance, i.e. reliability at a whole of system level is tracked monthly and compared to a rolling 3-year trend to assist with predicting systemic issues. When systems do not meet performance standards then Horizon Power investigate further often assessing and evaluating asset class performance patterns and trends to identify actions. We reviewed of a sample of the Asset Management Reports (AMRs) and note that the monthly reporting includes:
			  ○ Bad actors are reviewed on a monthly basis to identify issues at a feeder level
			  ○ Reliability (at a feeder level) performance measures, with low performance identified
			  ○ Power quality performance measures, with low performance identified.

			Process and Policy Rating: A — Performance Rating: 1
1.9	Asset management plan is regularly reviewed and updated	4	Through enquiries held with the Senior Manager Asset Services, the Regional Asset Managers and a review of Horizon Power's asset management framework, system, policies and processes, we noted that: • Region specific Asset Management Plans (AMP) are reviewed annually, as part of the AMP process and Corporate Budget process • Newly introduced in this Review Period is the combined Asset Management & Works Delivery Forum. Held twice a year, this forum provides opportunity for key stakeholders across the organisation to provide feedback and request updates to the asset management plan.

			• The AMP scopes and budgets are reviewed monthly and can be adjusted to address emerging risks to the business. • Asset Class Strategies and Asset Management Planning guidance modules are reviewed on a 5-yearly basis. • The Asset Management Plan is managed via PlanView across the whole organisation, allowing for real time visibility of any change requests and variations. • The Strategic Asset Plan is updated annually and includes a continuous improvement section that notes the improvements achieved over the previous year, and improvement actions to be undertaken in the near future.	
			Process and Policy Rating: A	Performance Rating: 1

4.2. Asset Creation and Acquisition

Key Process	Asset creation/acquisition is the provision or improvement of assets
Outcome:	The asset acquisition framework is economic, efficient and cost-effective; it reduces demand for new assets, lower service costs and improve service delivery.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations	
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions	4	Through discussion with the Manager Asset Services, PMO Manager and observation of Horizon Power's Project Management (P&PM) process, we note that: • The Project Management Methodology Playbook provides guidance across the whole project lifecycle, including development and required approvals at the business case stage. • The asset Management Guideline Module 2: Project Evaluation details the requirements of asset creation and acquisition at the options assessment stage. A minimum of two alternative options should be considered (in addition to the 'do nothing' baseline option). In this options evaluation stage, demand side options should be included if they are available. The guidance document provides examples of these demand management solutions that could include (e.g.) establishing a contract with a local company to reduce high load consumption during system' peak demand times in order to keep network capacity within acceptable operating bounds. • We observed a sample of project evaluations, for both minor works (under $5M) and complex projects (over $5m). • All potential maintenance projects are consistently reviewed utilising the Risk Value Movement assessment. • A new addition to the evaluation process during the Review Period was the establishment of the Investment Review Committee (IRC) which provides governance and due diligence for HP's major capital expenditure, inclusive of new assets. The IRC provides an independent functional assessment, review and endorsement that Business Cases are 'decision ready'. This independent evaluation is undertaken for all new assets and projects over the value of $5M. • A suite of business case templates and guidelines are available to ensure all projects are developed and evaluated consistently. In the financial evaluation model template, at a minimum users must complete a comparison between the do-nothing case and between 1-4 options. While comprehensive assessments are undertaken, it is not built into the templates that non-asset solutions should be considered where practicable. By building this step into the templates, the process will be made more robust.	
			Process and Policy Rating: B	Performance Rating: 1

2.2	Evaluations include all life-cycle costs	4	Through enquiries held with the Senior Manager Asset Services, Senior Asset Frameworks Engineer and Program & Portfolio Management Director; consideration of Horizon Power's processes for evaluating project lifecycle costs and examination of Horizon Power's Business Case templates, we note that: • The asset management guideline titled Module 2 Project Evaluation provide guidance on the lifecycle costs to be included in the project assessment and notes that this should include planning, design, acquisition, support costs, disposal costs and any other costs attributable to owning or using the asset including transportation / travel. • The Asset Class Strategies typically address the whole of life costs for each asset type, including risk-based recommendations for renewals/replacement decisions. • The Business Case template and accompanying Financial Evaluation Model for Business Cases require the Capex and Opex (both implementation and ongoing costs) to be considered when evaluating the total costs of the investment. • We reviewed the business case for the Munda Feed Reinforcement project in the Pilbara Region. This project proposed to underground a 10km feeder line that connected major customers. The business case included life-cycle costs including procurement and installation. These lifecycle costs were assessed along with associated savings that come from reduced maintenance costs for underground lines and reduced damage repair costs. • We note that for the majority of Horizon Powers transmission and distribution assets, it is rare to remove an asset without replacing it. In addition, the assets typically have long service life expectations, thus the organisation incorporates disposal costs into the replacement project.	
			Process and Policy Rating: A	Performance Rating: 1
2.3	Projects reflect sound engineering and business decisions	4	Through discussion with the Senior Manager Asset Services, Pilbara Regional Manager and consideration of Horizon Power's project management process we note that: • Horizon Power has a Formalised Asset Safety Assessment (FASA) Procedure that details how risks are managed to ensure safe design, construction, commissioning, operation, maintenance and decommissioning of assets across the network. The Project Management Methodology Playbook also outlines the risk assessment and safety in design process, including required signoffs, reporting and reviews, and how it is built into the project phases for minor works, non-complex and complex projects. We viewed an example of the safety signoffs required in the PlanView system for the non-complex Munda Feeder Reinforcement project delivered in Port Hedland. We also reviewed the Project Handover Report and Certificate which details the various signoffs, information handover and certification for assets. This includes risk assessment through Safety in Design to ensure that assets meet the required specifications. • The Project Management Methodology Playbook details the risk assessment and safety in design process for BAU/minor works, non-complex and complex projects. Complex projects have a 5 phase process and the others have 3 phases. As discussed above, the Muda Feed Reinforcement project was reviewed for this process. • We also reviewed the Port Hedland Underground Cable Risk Review and Options Report. This report was developed in response to an asset audit on the streetlight cables in Port Hedland and its purpose was to	

			assess the level of risk to the community and determine what actions are required to manage the risk and comply with the relevant legislation. The report considers recent industry practice, relevant historical safety incidents, conducts several risk assessments, and identifies the precise Act and Regulations to comply with. Furthermore, the report considers 8 options and makes a final recommendation balancing risk and cost using the standardised Risk Value Movement procedure. • The project development process built into PlanView is adequately designed to ensure for sound engineering judgement and business decisions are required to be recorded as part of the project justification and key milestones. • An Investment Review Committee provides an independent functional assessment for all complex projects. We reviewed an example of the feedback that the IRC would typically provide on a Business Case. In the example reviewed, the feedback included an additional project risk to be included, an additional benefit for inclusion, request for additional on-going maintenance modelling to be provided, request for additional details to be provided including the target reliability of supply, and inclusions of the design standards and regulations that the project needs to comply with. This independent evaluation is undertaken for all new assets and demonstrates that practices and processes are in place to ensure project reflect sound engineering and business decisions. All potential asset maintenance installation and replacement projects are reviewed consistently across the organisation utilising the Risk Value Movement assessment. We reviewed the non-complex business case for the Munda Feeder Reinforcement in Port Hedland and note that the project description included an assessment of the current risk to the business, strategic alignment and key project driver (reliability), assessment of solution options, and an assessment of whole of life costs for the preferred option.	
			Process and Policy Rating: A	Performance Rating: 1
2.4	Commissioning tests are documented and completed	2	Through enquiries held with the Commissioning Manager, the regional managers in the Pilbara and Kimberley, review of commission templates and supplied test sheets and a walk through of the documentation available on the Horizon Power intranet page we note that: • The commissioning manager was a new role created during the Review period. The role was created to increase the robustness of Horizon Power's commissioning processes with an initial focus on major projects. The commissioning manager led the development of new standard commissioning report templates and guidance documentation, which are now part of the project management toolkit standard provided to contractors and built into contract requirements. The commissioning manager also provides support to project managers across the business to ensure these new report standards are being implemented appropriately. • Commissioning requirements for large and small-scale projects are documented clearly. A 'responsible, accountable, consulted, informed' (RACI) table outlines the accountabilities for each component of the commissioning process, and the key stages that require mandatory sign offs. • Commissioning is built into PlanView and test activities are documented in this system. We viewed a sample of completed commissioning test sheets for a recloser to Transmission high voltage cables and noted the requirements for the cable description, visual inspection & safety check, end-to-end phase testing,	

			insulation resistance test, sheath integrity test, cable termination checks, documentation of all test results and the operational handover sign off.	
			Process and Policy Rating: A	Performance Rating: 1
2.5	Ongoing legal/environmental/ safety obligations of the asset owner are assigned and understood	2	Through discussion and walkthrough held with the Manager Asset Services, Technical Training Coordinator, the Risk and Audit Manager and consideration of relevant policies and procedures, we noted that Horizon Power conducts the following activities for identifying and managing regulatory obligations relating to its assets: • Network safety regulations and Notable and Reportable Incidents are managed by the Asset Services team. Annual training is provided across the organisation to ensure individuals understand their reporting obligations. Horizon Power has a culture of over-reporting and will redact any reports that do not meet the Notable and Reportable criteria. The review team noted that field crew personal were empowered and encouraged to report in potential incidents. • Regulatory Compliance directions are addressed in accordance with their priority set by the prioritisation process and are recorded and managed in CURA, Horizon Power's system for recording and managing corporate risks. Incidents are recorded and managed through Cintellate, Horizon Power's incident and hazard reporting and management system. • Checklists are completed to track environmental and native title approvals. • The Skills Matrix details the training requirements for each role within the business, including training for ENSMS Network Notifiable & Reporting Incident. The currency of this training is monitored to ensure personnel remain current with their understanding of legal, environmental and safety obligations. • The onboarding process includes a gap analysis of new hire competencies to determine if any training is required to maintain WHS regulatory compliance and Horizon Power compliance requirements. • The system to manage training and certification requirements, EmPowerMe was introduced during the Review Period. This system provides automated reminders to key personnel and their direct manager on any certification renewals that are required. Required training addresses environmental and safety training for field staff, as well as legal training including the scope of regulatory reporting requirements. Required minimum competencies, certification and licences are predetermined by the job role and identified in the ENSMS Competency and Training Guide. • Asset Performance KPIs are reported and tracked in the monthly Asset Management Reports, with both regulatory and internal KPIs identified and tracked. • In July 2021 when the new regulations were introduced for the North West Interconnected System, external coaches were engaged to ensure all key stakeholders were aware of their new obligations.	
			Process and Policy Rating: A	Performance Rating: 1

4.3. Asset Disposal

Key Process	Asset disposal is the consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets.
Outcome:	The asset management framework minimizes holdings of surplus and under-performing assets and lowers service costs. The cost-benefits of disposal options are evaluated.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations	
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process	5	Through enquiries held with the Senior Manager Asset Services, and an examination of supporting documentation, we noted that: • Live network monitoring is conducted via the Horizon Power Control Centre. • Asset performance data is collated on a monthly basis and reported in the Asset Management Report (AMR). Through this process, under performing and under-utilised assets can be identified. The report contains an assessment of 'bad actors' at a feeder level, and any feeders meeting the bad actor criterion will be investigated. • Asset class strategies define functional performance requirements. These strategies are reviewed on a five-yearly cycle and a detailed asset performance assessment is undertaken at this time. • The regions monitor asset faults and identify reoccurring / emerging failure patterns. In these cases, the region would request assistance from specific teams including Asset Services, Engineering Services and Operational Technology to determine if the issue is systemic or isolated.	
			Process and Policy Rating: A	Performance Rating: 1
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken	5	Through enquiries held with the Senior Manager Asset Services, and an examination of supporting documentation, we noted that: • The monthly Asset Management Report (AMR) tracks and publishes performance of assets, including critical failure rates and bad actors. Should these failure rates be higher than expected an investigation will be triggered and corrective actions or disposal undertaken. • An example of an investigation that was undertaken to examine poor performance was triggered by a reoccurring number of fauna contact with HP network. Engineering and project delivery stakeholders informed an independent investigation and recommended options to mitigate the risks of fauna interventions on the network were presented. The organisation is now evaluating and implementing mitigations to improve network resilience to fauna contact to reduce the risk of network initiated fire events and impacts to reliability.	

			• Notifiable and reportable incidents reported to Building and Energy will trigger an investigation to be carried out by Horizon Power to identify if there is evidence of performance or reliability issues that need to be addressed.	
			Process and Policy Rating: A	Performance Rating: 1
3.3	Disposal alternatives are evaluated	5	Through enquiries held with the Senior Manager Asset Services, and an examination of supporting documentation, we noted that: • Horizon Power has Asset Class Strategies that address end of life decisions based on age and provides recommended intervention actions based on asset condition which can include service life extension activities or replacement. • When an asset is decommissioned prior to the end of its service life, an assessment will be undertaken to confirm if the asset can be sold to another utility provider, transferred to another depot for use, or retained and used for spare parts. We examined an Equipment Decommissioning Schedule for Wedgefield primary transformer decommissioning and note that a component level assessment has been undertaken to determine which parts will be retained as spares along with the proposed storage location. • Horizon Power engages a third party to dispose of all hazardous gases across the region. A disposal certification is provided to confirm that the asset was disposed of correctly. • A 'Disposal / Write-off of Assets' policy is in place for processing the disposal and selling of an asset (after the decision has been made to dispose).	
			Process and Policy Rating: A	Performance Rating: 1
3.4	There is a replacement strategy for assets	4	Through enquiries held with the Senior Manager Sustainability and the Senior Manager Asset Services and review of the Disposal of Assets Guideline along with several example asset class strategies we noted that: • Horizon Power has an understanding of the expected service life for each of their asset class types, informed by historic failure data and industry benchmarks. Future energy solutions including long duration battery technology is a developing space and the service life of the technology is still be tested in the regions. The Asset Class Strategies address end of life decisions and provides recommended actions based on asset condition and/or age. For example, the transformers and reactors asset class strategy defines an end of life decision tree to determine if the asset enters a condition based replacement or defect based replacement program, or is run to failure or is programmed for a timed replacement. Four replacement strategies are identified with corresponding criteria required to be met. • Where an asset safety issue is identified, a plan will be developed to replace the asset as was the case with the reactor coil replacement program at the Hedland Terminal. These assets were at end of life and a program to replace them had begun, however when two reactor coils sprayed molten metal at failure it was determined that the replacement needed to be expedited to mitigate exposure of staff and contractors to the potential hazard, with various controls also being implemented to manage the assets in the short term to maintain safety. This example demonstrates that additional actions are be taken, should deficiencies in the existing asset replacement strategy be identified.	

			Process and Policy Rating: A	Performance Rating: 1

4.4. Environmental Analysis

Key Process	Environmental analysis examines the asset management system environment and assesses all external factors affecting the asset management system.
Outcome:	The asset management system regularly assesses external opportunities and threats and identifies corrective action to maintain performance requirements.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations
4.1	Opportunities and threats in the asset management system environment are assessed	4	Through enquiries held with the Senior Manager Asset Services, and an examination of supporting documentation, we noted: • The Strategic Asset Plan identifies the threats and opportunities in the asset management system using a PESTLE framework. Internal and external factors are identified as threats or opportunities and include political, technological, economic, legal, social and environment factors including uptake of electric vehicles, population growth, climate resilience, uptake of rooftop solar, and land availability to meet 2050 state climate goals. The section also addresses macro-level and localised factors that may disrupt Horizon Powers ability to achieve their objectives. These factors are weighted on a three-point scale to identify the potential impact they may have. • The Operational Environment and Heritage Management Plan identifies potential environmental, and heritage risks specific to Horizon Power operations and provides management measures to mitigate these risks. • Regional and project specific risks are assessed and managed through registers and maintained by the Regional Manager. • The rolling 10-year Asset Management Plan (AMP) is developed using the Risk Value Movement (RVM) and it is reviewed by the central asset management team on a quarterly basis, so that any changes to the regional asset management risk profile can be addressed in an agile manner. • Monthly asset performance, risk and safety reports may identify emerging opportunities or threats in the system which will be assessed and actioned as required. Process and Policy Rating: A — Performance Rating: 1
4.2	Performance standards (availability of service, capacity, continuity, emergency response,	4	Through enquiries held with the Senior Manager Asset Services, and an examination of supporting documentation, we noted that Horizon Power has: • Undertaken the required performance reporting, including the NQRS audit in 2023 which reports on the operation of the systems in place for monitoring compliance with legislated electricity quality and reliability standard. This report demonstrates that performance is measured and reasonably achieved, with significant

	etc.) are measured and achieved		weather event dates noted, in particular the ex-tropical cycle Ellie which flooded the areas of Fitzroy Crossing, Looma and Halls Creek in January 2023. • Undertaken an independent Performance Audit in 2023, as required by the EIRL2. In this report 12 minor non-compliances were identified and related the to need to update non-standard contracts, policies and information on the website; data sources associated to the annual performance reports, monitoring of check meter data and submission of annual renewal source reports. • A variety of KPIs that are reported to the executive on a monthly, quarterly, and annual basis. KPIs are identified as either a regulatory KPI or a non-regulatory KPI. • As noted in the 2023/24 Statement of Corporate Intent (SCI), Horizon Power provides to the Minister for Energy and the Western Australian Treasurer a report on performance for each three-month period. These quarterly reports will detail the actual quarterly and year-to-date performance of the enterprise, provide comparisons to SCI targets, and highlight any matters of interest. • The asset specific key performance targets are reported monthly through the Asset Management Report (AMR). These monthly reports include tracking and measuring of availability of services, capacity, continuity and quality, customer interruptions, customer charter response times, and works completed on time. In the Asset Management Reports reviewed, we note that Horizon Power reasonably met their key performance standards, and where targets are not met the reasons are analysed and mitigations actioned as required.	
			Process and Policy Rating: A	Performance Rating: 1
4.3	Compliance with statutory and regulatory requirements	4	Through enquiries held with the Senior Manager Asset Services, the Audit Manager and an examination of supporting documentation, we noted that there are a range of statutory and regulatory requirements that Horizon Power operates under, including but not limited to the Electricity Act (and associated regulations and codes) Occupational Safety and Health Act and the Electrical Network Safety Regulations (ENSR). Horizon Power manages compliance to these requirements through a suite of guidelines, frameworks and procedures including the ENSMS Guideline, Compliance and Audit Guideline, and Training and Competency Guideline, which further inform business processes and procedures and work practices required to support compliance with these requirements. Further to this, we note that: • In the case of new legislation, for example the Security of Critical Infrastructure Act, Horizon will engage specialists to advise on any gaps in process or practice to ensure compliance is achieved leading up to adaption. • We note the review of the Port Hedland Underground Cable Risk Review and Options Report. This report references the relevant Legislation governing the review action. The report explicitly references that Horizon Power is required to ensure assets are safe “So Far As Is Reasonably Practicable” (SFAIRP), as required under the applicable WA Work Health & Safety Act and referenced by the Electricity (Network Safety) Regulations (ENSR). • Field staff receive training to be able to identify reportable faults, and guidance is available through the Fault Categorisation Framework and guidance is provided in the Network Notifiable & Reportable Incidents - Guidance notes. Training is developed by the Asset Services Team. Identified faults that may need to be reported to Building and Energy are internally reviewed and validated.	

			• Training is tracked through the EmPowerMe system and training requirements are defined by role. • Environmental and Heritage requirements are managed through clearance request forms, which are reviewed by the Environment and Land Management Team. Clearance request forms are accessible via Horizon Power's internal intranet. • Internal performance compliance management is monitored through AMRs with regulatory required KPIs identified in the report. External performance compliance is reported on a quarterly basis to Building and Energy through the NSPO and performance is monitored to identify any material changes to Horizon Power's asset risk profiles with treatment plans identified and implemented where required.	
			Process and Policy Rating: A	Performance Rating: 1

4.4	Service standard (customer service levels etc) are measured and achieved	4	Through enquiries held with the Senior Manager Asset Services, and an examination of supporting documentation, we noted that Horizon Power has:
			• The monthly Asset Management Report measures and tracks key service standards. These performance measures include:
			  ○ Customers with >16 interruptions (rolling 12 months and FYTD)
			  ○ Customers affected by >12 hours interruptions (rolling 12 months and FYTD)
			  ○ Power quality customer complaints.
			The measures all have identified targets, and measures. KPIs are also identified as either a regulatory KPI or a non-regulatory KPI and commentary is made on any measures that do not align with targets and historic trends. We note that in the Asset Management Reports reviewed, Horizon Power both measures and reasonably achieved their service standards, and in cases where performance was not met, the reasons are assessed and mitigations to address identified issued developed and actioned as necessary. An example in the April 2024 Asset Management Report, is that the SAIDI limit (400) for Fitzroy Crossing was not reached (704 measured), and its noted that on 19 April 2024 there was a generation failure for 20 minutes due to a station trip during BESS commissioning works. Similarly, non-performance was assessed at a feeder level and a detailed analysis produced to account for the non-performance over the month. The reasons noted in the April 2024 AMR for the non-performance of the feeder identified as LAV 001 WINDARRA included bird, equipment failure, wind or wind borne debris, lightning, and emergency outage for a hazard.
			• Horizon Power also measures customer satisfaction through annual reporting in the Brand Reputation and Customer Satisfaction Research report. Targets are set and results of this survey are reviewed if the targets are not achieved.	

			Process and Policy Rating: A	Performance Rating: 1

4.5. Asset Operations

Key Process	Asset Operations is the day-to-day running of assets (where the asset is used for its intended purpose).
Outcome:	The asset operations plans adequately document the processes and knowledge of staff in the operation of assets so service levels can be consistently achieved.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations	
5.1	Operational policies and procedures are documented and linked to service levels required	2	Through enquiries held with the Senior Asset Services Manager, Regional Asset Managers in the Pilbara and Kimberley region, testing a sample of relevant arrangements, and examination of documented policies, procedures and protocols, we note that: • A range of operational procedures and guidelines exists as controlled documents to govern the network operations. These include for example standard operating procedures for switching processes, fault management procedures and staff/shift management for the Horizon Power Control Centre (HPCC). Controlled documents are reviewed periodically. All documented policies and procedures are centrally available on Horizon Power's intranet page and documented in their document management (DM) system. • Developed procedures at an asset class level which specifically refer to required service levels (where appropriate). • Documented plant operating instructions for the safe operation of the specific item of equipment, or specific electrical or mechanical procedures. • Key Performance Indicators (KPI) measures such as System Average Interruption Duration Index (SAIDI), System Average Interruption Frequency Index (SAIFI) are reported on a monthly basis through the Asset Management Report (AMR) and are available in real time via the PowerBI generated dashboard. • Region specific AMPs provide descriptions of relevant operational activities and tasks to achieve the required service levels.	
			Process and Policy Rating: A	Performance Rating: 1
5.2	Risk management is applied to prioritise operations	4	Through enquiries held with the Senior Asset Services Manager, Regional Asset Manager in the Pilbara and Kimberley region and an examination of documented policies, procedures, and protocols, we noted that: • The Safety and Health Management System Manual sets out policies, principals, accountabilities from the board down to operations team members. • The faults categorisation document contains a list of all the typical faults, by asset class that can be observed on the network. The process flow is mapped from the initial incident through to closeout, with different options depending on the priority of the fault.	

			• Horizon Power identifies the business rules for different fault types and provides guidance on priority rating which takes into consideration defect duration and the criteria for re-energisation. • In the daily pre-start meetings key risks associated with the planned tasks are discussed, and any rescheduling of works to accommodate urgent reactive activities is communicated. We attended pre-start meetings in the Kimberley and Pilbara region and noted that changes to scheduled work were communicated to accommodate mandatory rest time for crew members who were called out to attend a fault the previous night. • Fortnightly work planning meetings are held to discuss and prioritise operational and maintenance tasks at each location, and to address any current or potential delays to progressing the works. The review team attended a fortnightly work planning meeting in Port Hedland, where the prioritisation of projects was discussed. • Risk management has been incorporated into operational tasks, through activities including: ○ Job Risk Assessment (JRA) ○ Safe Work Method Statements (SWMS) ○ Permits to work. ○ Site inductions ○ Take fives. ○ Safety leadership KPIs	
			Process and Policy Rating: A	Performance Rating: 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	Through enquiries held with the Senior Asset Services Manager, Pilbara Regional Asset Managers, examination of the asset register in Ellipse and supporting guidance documentation, we noted that: • Ellipse is the primary asset register and is used to record the following: ○ Equipment type ○ Equipment ID ○ Location ○ Material type ○ Work orders ○ Planning ○ Maintenance tasks and Maintenance history including condition assessment and defect history. • Guidance documentation is available to ensure that all users understand the asset register data requirements. Guidance includes the Data Classification Guideline, Data Collection Guideline, Data Quality Guideline, and a suite of class specific hierarchy guidelines. • The asset register data was validated during the Review Period via a LiDAR survey. This survey was conducted using survey aircraft to collect condition and location data. In many cases condition details were identified that were not previously known, and in some cases, assets were located that were not previously	

			included in the asset register. This activity demonstrates Horizon Power's commitment to validating and improving the accuracy of their asset data register. • Cherwell is the master asset register for both OT and IT assets. Asset data is driven by the asset class strategy and assets captured in Cherwell align to asset lifecycle defined in the asset class strategy and is validated for accuracy on an ongoing basis. • FieldReach (Ellipse's mobile solution interface) is used by field staff to action planned preventative (P1) work orders and raise defects. The field staff raise defects on incorrect data within the asset register when anomalies are identified during maintenance and operations activities. We visited a pole with a defect (missing covers) and observed the process to raise a defect through Field Reach and note that this fault was immediately available to view on the asset register in Ellipse • Upon review of capital projects, it was noted that once the project was completed, the data team are notified at completion with relevant data and attributes to create a new entry on the asset register.	
			Process and Policy Rating: A	Performance Rating: 1
5.4	Accounting data is documented for assets	4	Through enquiries held with the Senior Asset Services Manager, Pilbara Regional Asset Managers, Financial Analytics & Performance Lead, and an examination of the asset accounting data we noted that: • Horizon Power has a fixed asset register (FAR) that captures all assets owned and includes a unique identifier code, asset name, description, purchase and capitalisation dates, purchase cost, department, cost centre, residual value and asset life and depreciation rule. • All maintenance costs are captured in PlanView and can be attributable to specific assets.	
			Process and Policy Rating: A	Performance Rating: 1
5.5	Operational costs are measured and monitored	4	Through enquiries held with the Senior Asset Services Manager, Regional Asset Managers of Kimberley and Pilbara Regional Maintenance Planners and Works Delivery Managers, and examination of documented policies, procedures and protocols, we noted that: • Operational costs are included within the annual OPEX budget during the AMP process • Monthly Asset Management Reports include information related to OPEX budgets tracking • Work order costs are regularly measured against standard job costs and large discrepancies (greater than ±10%) require a change request and may trigger an investigation. • Opex reporting occurs monthly and includes summaries of the budget, actual and cost variance. Tracking of costs over the previous 12 months is mapped on a monthly basis and a summary of labour overtime is produced that denotes the specific type of work (P1/P2/R1/R2) that required overtime hours. Opex expenditure summary for each key town is provided in the region and a summary of the top 10 work orders for each category of maintenance expenses is included. • Faults are attributed to a specific asset and any subsequent work orders are linked to the fault report.	
			Process and Policy Rating: A	Performance Rating: 1

5.6	Staff resources are adequate and staff receive training commensurate with their responsibilities	2	Through enquiries held with the Manager Asset Services, Regional Asset Managers of Port Hedland and Broome, Technical Training Coordinator, and examination of Horizon Power's EmPowerMe system, and regional resource planning strategies, we noted that: • The Skills Matrix details the training requirements for each role within the business. The currency of this training is monitored to ensure personnel remain current with the required training commensurate with their responsibilities. This document shows the mandatory, optional, restricted and Pilbara specific licences and certifications for each role (for example asset manager, senior metering technician, site supervisor, protection technician and senior network officer). A separate chart is provided for network, transmission, generation, and task specific. We noted regional managers attempt to organise leave and training rotations in advance to improve availability and attendance to avoid standdowns due to training expiry. • The onboarding process includes a gap analysis of new hire competencies to determine if any training is required to maintain WHS regulatory compliance and Horizon Power compliance requirements. • Depending on role responsibilities, specific annual required training and refresher courses are schedule up to a year in advance to ensure that operational activities can be planned around the required training dates. This training can include the electricity supply refresher training, the elevated work platform rescue and live low voltage panel rescue. We viewed the 12-month resourcing plans in the Pilbara and Kimberley region and note that key dates were blocked out for staff to complete required training. • EmPowerMe is a new system introduced during the Review Period and used to manage required training and certification. This system provides automated reminders to key personal and their director manager on any certification renewals that are required. Required training addresses environmental and safety training for field staff, as well as legal training including the scope of regulatory reporting requirements. • We viewed an automated email received by the Pilbara Works Delivery Manager detailing the upcoming certification renewal requirement for one of his direct reports. The email was issued three months in advance of the certification expiration date. • Workers will be stood down from specific duties if they do not complete the required annual training within the nominated timeframe. • We viewed the regional resourcing forecasts for the Pilbara and Kimberley regions and note that these plans forecast required resourcing hours out till 2028, broken down to transmission and distribution hours. An assessment of the required and available hours for the immediate 12 month forecast further breaks down the required resourcing requirements for P1, P2, R1 & R2. This assessment allows any resourcing gaps to be identified and plans adjusted if required. • Contractor competencies are logged in the EmPowerMe system. ENSMS Contractors are required to complete the ENSMS training as per the ENSMS Competency and Training Guide. The Contractors are expected to comply with all Horizon Power technical and OHS requirements. In the Kimberley Region, Horizon Power has a dedicated Contract Manager who is responsible for the maintenance contractors across the region. The Contract Manager speaks with the Kimberley Region contractors on a daily basis and undertakes site visits on a weekly basis to review performance.

			• We met with a new engineering graduate who was being rotated around the field offices to gain site experience and mix with the operations staff.	
			Process and Policy Rating: A	Performance Rating: 1

4.6. Asset Maintenance

Key Process	Asset maintenance is the upkeep of assets.
Outcome:	The asset maintenance plans cover the scheduling and resourcing of the maintenance tasks so that work can be done on time and on cost.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations

6.1	Maintenance policies and procedures are documented and linked to service levels required	2	Through enquiries held with the Senior Asset Services Manager, Pilbara and Kimberley Regional Asset Managers, testing of relevant maintenance arrangements, and examination of documented policies, procedures and protocols, we noted that:
			• Maintenance policies and procedures are informed by the asset management policy and strategy. Further guidance is provided in the asset management modules.
			• The high-level performance and service targets are further detailed in the Asset Class Strategies. The class strategies set the performance measures and the assessment for functional performance.
			• The Maintenance Work Delivery Management – Process and Governance Overview document was reviewed and outlines a concise view of maintenance management. This document provides the following:
			  ○ Definition of the key processes, policies, procedures and guidance documents, including links to their locations. Maintenance procedures are identified with clear labels and links.
			  ○ Key maintenance systems, i.e. Ellipse, Field Reach, OpenText (document management).
			  ○ Key roles and responsibilities.
			  ○ Definitions, descriptions, purpose and examples of maintenance work types, including interrelationships P1 to P2, or R1 to R2, etc.
			  ○ Outline of maintenance process including steps, responsibilities and corresponding KPIs.
			  ○ Definition of PPIs and KPIs.
			• The MST Frequencies Guidelines details the inspection frequencies for each asset type, including relevant document control notes.
			• The monthly Asset Management Report (AMR) tracks both asset performance measures and completion of maintenance tasks on schedule measures as these two elements are intrinsically linked.
			• During the Review Period we note that work has be undertaken to consolidate the Asset Class Strategies so that there are fewer asset classes, and the strategies have a revised short format with asset class specific KPI's and performance measurement framework.

			• A sample of technical maintenance guides were reviewed, and we note that the documented procedures provide task instructions along with allowable testing tolerances.	
			Process and Policy Rating: A	Performance Rating: 1
6.2	Regular inspections are undertaken of asset performance and condition	2	Through enquiries held with the Senior Manager Asset Services, Pilbara and Kimberley Regional Asset Managers & Works Delivery Managers, testing of relevant maintenance arrangements, and examination of documented policies, procedures, protocols and reports, we noted that: • Risk informed inspection strategies are developed at the asset class level, with inspection frequencies defined in the MST Frequencies Guidelines. • Maintenance Scheduled Tasks (MST) determine regular maintenance tasks such as inspections. It is the Regions' responsibility to convert MSTs to work orders and to package and deliver the work. Further discussion of this manual process is contained in element 6.3. • Maintenance work orders are issued to field staff in FieldReach (a mobility app). When tasks are completed, the field staff provide a task update through FieldReach. This is synchronised with Ellipse and the data is saved against the asset. The completed maintenance task is typically updated in Ellipse within 24 hours. • The review team was provided a walkthrough of the Ellipse system to understand the functionality, ability to drill down to individual assets and to view historical maintenance and performance records. It was noted that regular inspections were undertaken, along with a record of the asset performance and condition. • The review team attended a fortnightly project scheduling meeting in the Pilbara Region and noted that all current and future maintenance activities were reviewed, and progress discussed. • We reviewed asset condition reports completed during the Review period, including substation inspection reports, pole based clearing, and high voltage circuit breaker inspection and testing and note that these activities were completed on a regular cycle and performance results were reported. We note that Horizon Power has a suite of field instructions (FI), technical maintenance guides (TMGs) and check sheets available to ensure that the activities are completed consistently and to the required standards. • Asset performance including internal and regulatory KPIs are tracked and monitored via the monthly Asset Management Report. • The visual guideline, 'Distribution Assets Condition Assessment Guide' provides a comprehensive tool for the asset inspection process, which defines the classification of condition based on severity and prioritisation requirements for recording condition during asset inspection including critical conditions. The guide provides the inspectors a standard to assess the asset condition from rating zero to four. This guideline is over 500 pages long and is objective is to reduce the subjectivity of inspections and ensure asset investment is directed towards the highest need areas.	
			Process and Policy Rating: A	Performance Rating: 1
6.3		2	Through enquiries held with the Works Delivery Managers and Regional Managers in the Pilbara and Kimberley Regions, the Senior Manager Asset Services, Asset Services Delivery Manager, sample testing of relevant	

	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule		maintenance arrangements, inspection of selected assets and examination of documented policies, procedures and protocols, we noted that: • Maintenance plans and performance of these plans are documented within Horizon Power's Ellipse maintenance system. • The Maintenance Scheduling Task (MSTs) Frequency Guideline details the recommended inspection frequencies for each asset type. During the Review Period Horizon Power implemented a change control process to ensure any change to the scheduled MST is reviewed and approved before it can be incorporated into Ellipse. Edit restrictions were enacted so that only a core centralised team were able to make the changes, providing centralised governance. • Daily pre-start meetings and weekly planning meetings are held, which are used to discuss and plan upcoming work, and where relevant to discuss outstanding work. We observed pre-start meetings held during our physical visit to Horizon Power's Port Hedland and Broome operations. • The Port Hedland office hold fortnightly delivery meetings to review progress of all activities including planned, corrective and capital works. We observed this meeting and noted that any delays to scheduled works were discussed, documented and tracked. • The Broome office holds works delivery meetings three times a week, on Monday, Wednesday and Friday with the session of Friday focused on drawing reviews. • Scheduled maintenance work is undertaken by regions, predominantly using designated regional staff and contractors. In the Broome region, a new Contract Delivery Manager role was created during the Review Period. This resource managed contracts across the region to ensure that maintenance plans allocated to contractors were documented and completed on schedule. • Monthly Asset Management Reports track performance and include measures such as percentage works delivery on time, condition not assessed on time by age, and graphs of maintenance work overdue past scheduled date (30 – 90 days) and >90 days. We note that Horizon Power are aware of a deficiency in their process for tracking completion of maintenance tasks. Currently it is the regions responsibility to transfer MSTs to work orders. This is a manual task carried out by the regional asset manager. If the MST is not converted to a work order then the maintenance task cannot be tracked centrally to confirm the task is documented and completed on schedule. However, the work order can be repeatedly deferred without requiring any additional approval. For tasks on a longer schedule (for example a 5 yearly task) it is possible to defer the task for up to 5 years, i.e. until the next scheduled MST is triggered. We further note that Horizon Power has plans to address this in the future through the introduction of SmartWorks and improvements to MST governance. These initiatives will address the known concern regarding the manipulability of MSTs in the system. In addition, we also note that in the AMR, the KPIs for tracking that maintenance works are completed on schedule are not broken down so that preventative and reactive maintenance works can be viewed separately, with separate target completion timing based on priority of the works.	
			Process and Policy Rating: B	Performance Rating: 1

6.4	Failures are analysed and operational/maintenance plans adjusted where necessary	2	Through enquiries and walkthroughs held with the Senior Asset Services Manager, Regional Asset Managers from the Pilbara and Kimberley regions, Data Management Officers, Senior Performance Manager and examination of documented policies, procedures and protocols, we noted that: • Horizon Power have identified critical asset classes and developed corresponding Asset Class Strategies. These strategies contain in-depth analysis of potential failure modes, an assessment of the impact of age and condition on failure, assessment of the existing risks and profile data for that asset class. Maintenance strategies are developed to address the known failure modes. This is analysis is reviewed every 5 years, to consider recent performance, reliability and failure data. The strategy will be updated to account for failures where necessary. • Asset failures or trends will generally trigger an investigation, using failure mode analysis and other investigation techniques with corrective actions developed and recorded in the Cintellate system to ensure they are tracked and monitored. High risk asset failures or high potential safety incidents are also reviewed by the Executive group. An example of an asset failure we obtained that triggered an investigation was an LV Frame failure at Broome. The investigation assessed the failure mode, while also reviewing the asset environment, historical maintenance records, and the related field instructions and guidelines. The investigation report noted that the Distribution Asset Condition Assessment Guide (DACAG) did not provide sufficient examples of a deteriorated/damaged concrete/brick substation. Two key actions from this incident was to identify all sites where this existing LV equipment is located and perform a one-off condition assessment of both the LV equipment and enclosure as well as to implement an operating restriction at each of these sites. A further finding of the investigation was to include an update to the maintenance checklist to include more specific requirements for the inspection and condition assessment of the equipment enclosure with further prompters built in and examples from the DACAG. • The monthly Asset Management Report (AMR) summaries KPIs at a regional level, with space for commentary on the results. During the review period, Horizon Power have expanded the AMR to include a bad actor report. This tracks feeder performance against the rest of the asset class, compared to a 4-year weighted average. A criterion is set to determine bad actors and any feeders meeting these criteria are investigated. • If a potential unexpected and/or systemic asset failure (identified through monthly performance reporting, or through fault reporting) is detected, this will be logged as an asset risk to be managed. Where appropriate, a formal investigation will be conducted, and corrective and preventative actions with assigned timeframes and accountabilities allocated and tracked. In some cases, this will result in a change to the ongoing operational / maintenance plans and some examples of this occurring during the Review period are detailed below: ○ The AMR publishes the critical failure rates. Unassisted conductor failures in Carnarvon is an example where this failure data triggered a review and adjustment of maintenance plans. The AMR identified that unassisted conductor failure in Carnarvon was 6 times higher than the organisation's target. A review and inspections were was carried out for all conductors in the area including a detailed condition assessment. This resulted in identifying the need for a major capital program to replace high risk conductors in Carnarvon. Where significant failures are identified in a region, Horizon Power may also complete targeted ad-hoc studies to determine if the failure pattern is specific to that area or systemic across the business.

			○ The regional teams monitor defects and faults, and these are discussed at a regional level at pre-start meetings and in the fortnightly works delivery scheduling meetings. Any unexpected asset failures are communicated across the business and investigations may be carried out to determine if there is a systemic issue. These investigations are undertaken by the Asset Services Team. For example, in 2022 in Port Hedland there were two incidents where a third-party contractor hit underground streetlight cables. In both instances a DBYD application had been completed and which did not identify any underground cables, so the third-party contractors utilised excavator equipment. The Port Hedland regions identified this as an issue and undertook an audit of the underground cabling of streetlights in Port Hedland. The audit identified a number of issues with the depth of the cables and the screening of the cables. Key stakeholders, including the Town of Port Hedland and Water Corporation, were engaged to explain the issue along with the mitigation plans. This was also the trigger for a larger television public information campaign to increase awareness of the risks associated with digging around buried electrical assets. ○ Another example of an adjustment to maintenance plans that occurred during the Review period as a result of failure analysis is insulator washing. The practice of live line washing was suspended by Building & Energy after a safety event occurred on Western Power's lines. In many parts of the state natural washing occurs during rain events. In the Pilbara however there are less frequent rainfall events and seasonal rainfall or lack thereof can result in increased pollution on insulators and is some cases a minor increase in pole top fires was recorded. In response to this, Horizon Power reinstated de-energised insulator washing in certain parts of the Pilbara region (risk based considering location to the coast and pollution sources) to further mitigate the risk of pole top fires. Horizon Power also no longer installs timber crossarms and has multiple design solutions available to increase resilience and improve performance of its overhead assets in heavily polluted conditions such as porcelain high performance insulators and the installation of steel crossarms to mitigate pole top fire risk. • All asset faults are logged through the FieldReach system and typically will contain an image of the fault. The regional asset manager will review the fault and its prioritisation and in the case of an asset failure, they will initiate an investigation including a site visit to inform the best course of action. The Regional Asset Management Plans are developed on an annual basis; however, they can be adjusted dynamically with adjustments to existing programs or initiation of new projects through the capital investment framework business processes in order to adapt to a change in the regions risk profile. Thus, if an asset failure has been identified, the maintenance and replacement plans can be modified to address failures as necessary.
			Process and Policy Rating: A / Performance Rating: 1
6.5	Risk management is applied to prioritise maintenance tasks	2	Through enquiries and walkthroughs held with the Manager Asset Services, Esperance and Karratha Regional Asset Managers, Regional Maintenance Planners and Works Delivery Managers, and examination of documented policies, procedures and protocols, we determined that Horizon Power has: • Developed task frequencies using a risk-based approach and documented the recommended inspection frequencies in the MST Frequency Guideline.

			• Regional Asset Management Plans (AMPs) are developed using the Risk Value Movement calculation. This risk-based approach assesses the cost to transition to the target risk for each proposed project. • Each maintenance task has an associated priority rating attached to them that will indicate how urgently the work needs to be performed. Guidance on the prioritisation for corrective maintenance is provided in the AMP Instruction Module 7 Maintenance Tactics. This prioritisation for corrective maintenance is initially set by the field crew that identified the fault, but will be reviewed by the regional asset manager and updated if required. The jobs identified with highest priority (other than safety related) need to be completed within a two-week period. • Implemented a fortnightly meeting to discuss and prioritise maintenance tasks at each location. We witnessed a fortnightly project review meeting in Port Hedland and noted the priorities assigned to each maintenance task. • Implemented daily pre-start meetings at each operational location to discuss and prioritise work for the day. We witnessed the pre-start meetings at both the Port Hedland and Broome offices and note that the work crews were instructed on the priority of the tasks to be completed that day. • Works are scheduled based on risk, for example the Kimberley region undertake a vegetation cut prior to the start of the higher-risk wet season. • Developed a detailed risk analysis for each asset class. The asset class strategy then addresses the key risks for each asset class.	
			Process and Policy Rating: A	Performance Rating: 1
6.6	Maintenance costs are measured and monitored	4	Through enquiries held with the Senior Manager Asset Services, Port Hedland and Broome Asset Managers and Works Delivery Managers, and a review of current processes and polices we noted that: • Horizon Power has a repository of costs for standard maintenance tasks. These standard costs are used to develop costs estimates for the Asset Management Plan. • Maintenance costs are budgeted in the AMPs and recorded in Ellipse. Ellipse tracks the planned, actual and variance for each work order. This is reviewed to assess how accurate the estimates were and if the standard maintenance costs need to be adjusted. • A change that has occurred during the review period was to attribute costs directly to the asset rather than at the feeder level. This is enabling Horizon Power to develop a more granular repository of historical maintenance costs at an asset level. • Monthly AMRs track planned and actual costs at a regional level and include commentary to explain any anomalies. • Any variance of ± 10% over or under the planned costs require a change request to be submitted and approved by management. • Horizon Power also demonstrated how they forecast, record, monitor and evaluate associated maintenance labour for all maintenance types across a financial year. Planned maintenance was typically scheduled during periods of historically low reactive maintenance periods to smooth out maintenance labour requirements.	

			Process and Policy Rating: A	Performance Rating: 1

4.7. Asset Management Information System

Key Process	An asset management information system is a combination of processes, data and software that support the asset management functions.
Outcome:	The asset management information system provides authorised, complete and accurate information for the day-to-date running of the asset management system. The focus of the review is the accuracy of performance information used by the licensee to monitor and report on service standards.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations	
7.1	Adequate system documentation for users and IT operators	5	Through discussion held with the Senior Manager Technology Shared Services and IT Service Delivery Manager we noted that Horizon Power has the following documentation for users and IT operators: • Supporting documentation is available on the organisations intranet (Wiki) page. These supporting documents are updated regularly at set intervals. • The IT team provide training (both online and in person) to ensure the IT systems are understood by users and IT operators. • A number of guidance documents were examined by the review team and included: ○ Suite of hierarchy guidance documents, with separate documentation provided for Distribution, Transmission, SPS and EV Charging Infrastructure. ○ Suite of Ellipse data standards including the Productive Unit Hierarchy, Register (HP Top Level) and the Equipment Register (SPS) ○ Information Technology Backup Policy ○ Data Stewardship and Custodian Guideline ○ Domain Password Policy.png ○ Information Technology Policy and Guidelines ○ ETL Standards and Best Practices ○ Master & Reference Data Management ○ Metadata Guideline	
			Process and Policy Rating: A	Performance Rating: 1

7.2	Input controls include appropriate verification and validation of data entered into the system	4	Through enquiries held with the Senior Manager Technology Shared Services and IT Service Delivery Manager and an examination of the control and validation of data we noted that: • New data governance framework was introduced during the Review Period and along with supporting documentation, several layers of governance were introduced. These governance layers include a Data Governance Steering Committee, Data Governance Council and a data stewardship forum. • Asset Services team set the business rules for data governance to ensure appropriate verification and validation of data occurs. • Access to the Horizon Power asset data system is based on role-based authorisation. The lowest required access is issued to users, and this access is reviewed regularly to ensure that the provided access is still required. • FieldReach users undertaking maintenance work orders have individual logins, so that maintenance entries can be tracked to the individual user. • Field crew can identify incorrect asset data. In these cases, a change request will be issued along with any supporting information (for example a photograph). This is reviewed by management and the asset data updated if appropriate. No asset data can be updated without a review occurring. • Data is further validated on a monthly basis via the Asset Management Report.	
			Process and Policy Rating: A	Performance Rating: 1
7.3	Security access controls appear adequate, such as passwords	2	Through enquiries held with the Senior Manager Technology Shared Services, IT Service Delivery Manager, and a walk through of the security access controls we noted that: • Unique user IDs are created for all users and are at least 15-characters long. Three or more unauthorised attempts will lock the account. • Access requires multifactor authentication. All systems are monitored alerts are triggered for any anomalous behaviour on the network. • Mobile phones can access systems using mobile device management software and multifactor authentication for business purpose. • The lowest required access is the default, and any additional accesses provision are reviewed regularly to ensure that the supplied access is still required. • For specific roles that require high level access (i.e. switching), a practical competency test is required before access will be granted. This practical competency test is witnessed by a supervisor to confirm that the new user can be approved for access. A partial access can also be issued to allow a user access to the system on the provision that they work under supervision. • Where third party access to systems is required, it was reported that read only access was supplied.	
			Process and Policy Rating: A	Performance Rating: 1

7.4	Physical security access controls appear adequate	2	Through enquiries held with the Regional Manager, Pilbara, Acting Works Delivery Manager, Pilbara East, Acting Asset Manager, Pilbara East, Senior Manager Technology Shared Services, IT Service Delivery Manager, and an examination of the physical security measures at a number of key sites we noted that: • All buildings require security card access. • Critical infrastructure is monitored via CCTV. Security fencing surrounds key infrastructure including substations. • Transmission substations have Bluetooth locks called NoKe. A specific NoKe access can be granted to contractor for a set timeframe to enable access to complete work at the site. The access expires at the end of the specified contract period. • The review team observed a number of security measures at the South Hedland 220kV Terminal including security fencing, NoKe locks and lasers. • During site visits, physical security access was observed to multiple levels of access requirements, for example the Broome Depot secure car park required swipe card access, then required secondary swipe card access to enter the rear laydown / maintenance yard. Similarly, the South Hedland 220kW Terminal had initial CCTV monitored external perimeter swipe card access. The substation then required a NoKe access credential to access the yard. Inside the substation had further lock-out access requirements for specific equipment and the control room, including physical sign-in. • During the site inspections and interviews, the review team were required to sign-in to all buildings, inducted and were escorted at all times. • Server rooms have restricted access controlled by the Property Management team via request. • Switching room access is limited to specific authorised personal only. The review team tested this access using a visitor pass and noted that they were unable to gain entry to the room. • Security incident reports are logged in the Cintellate system and reviewed to determine if any follow up actions or investigation is required.	
			Process and Policy Rating: A	Performance Rating: 1

7.5	Data backup procedures appear adequate and backups are tested	4	Through enquiries held with the Senior Manager Technology Shared Services, IT Service Delivery Manager, Senior Manager Emerging Energy Technologies, and review of the Backup Policy we noted that:
			• The Information Technology Back Up Policy outlines the minimum backup controls to ensure data is protected from loss due to physical failure, human error, hard/software failure of ransomware attack. Different backup requirements are set for the Malaga Data Centre (production), Bentley Computer Room (non-production), and various cloud platforms.
			• Testing of backups occurs at regular intervals and we note that the IT Backup Policy requires:
			  ○ Periodic verification of backups must be performed.
			  ○ Daily review of backup jobs must be undertaken to check for success / failure.	

			○ Test (random) restores are to be performed at least monthly to verify the success of a backup. Regular restore requests will be sufficient to addresses this.	
			Process and Policy Rating: A	Performance Rating: 1
7.6	Computations for licensee performance reporting are accurate	5	Through enquiries held with the Senior Manager Technology Shared Services, IT Service Delivery Manager, and a walk through of the documentation available on the intranet page we noted that: • Monthly Asset Management Report reports on the regulatory required metrics. An improvement to this report that has occurred during the Review period is the shift to producing the report using PowerBI. This has enabled a more user-friendly interface and allows users to 'self-serve' and access the metrics they require, outside of the monthly collation of the AMR. • Regulatory asset performance reporting includes results across each region for SAIDI (System Average Interruption Duration Index) and SAIFI (System Average Interruption Frequency Index).	
			Process and Policy Rating: A	Performance Rating: 1
7.7	Management reports appear adequate for the licensee to monitor license obligations	5	Through enquiries held with the Senior Manager Technology Shared Services, IT Service Delivery Manager, and an examination of the monthly Asset Management Reporting we noted that: • Horizon's monthly asset performance report, the Asset Management Report (AMR) includes reporting of regulatory requirement such as on availability of service, capacity, power quality, continuity, costs, emergency response events, etc. • Additional reports are capable of being generated from Ellipse, Cintellate and CURA systems, and monthly reporting to the board on safety issues and health of the assets is undertaken. In additional external performance reporting occurs on a three yearly cycle and includes the NQRS (reliability) and NSPO (safety) audits.	
			Process and Policy Rating: A	Performance Rating: 1
7.8	Adequate measures to protect asset management data from unauthorized access or theft by persons outside the organisation	2	Through enquiries held with the Senior Manager Technology Shared Services, IT Service Delivery Manager, and a walk through of the documentation available on the intranet page we noted that: • Physical security measures (as discussed in element 7.4) are in place to reduce unauthorised access to critical infrastructure and data. • As identified in the Information Technology Policy and Guidelines; Information, systems, and infrastructure must be protected against unauthorised access. Some measures to achieve this protection include: ○ Information, systems, and infrastructure must be protected against unauthorised access.	

			○ All users must sign the Computer Security & Confidentiality Form DM#2832091 as a condition of access. ○ Multi-factor authentication (MFA) will be used alongside passphrases. ○ Non-Horizon Power PCs and other devices must not be connected to the network without prior approval from Horizon Power Cyber Security team. ○ Access not being granted generically to external organisations but to named individuals. ○ Firewalls are reviewed regularly and Multifactual authentication has been deployed on the firewall to secure access. ○ Web filtering takes in place to prevent access to unauthorised sites that present a security risk. ○ Horizon Power issued software licences are allocated to specific persons via an approval process and it is not possible to share licences between staff members. ○ No software can be installed without admin approval. ○ Governance framework has been introduced to better protect data from unauthorised access.	
			Process and Policy Rating: A	Performance Rating: 1

4.8. Risk Management

Key Process	Risk management involves the identification of risks and their management within an acceptable level of risk.
Outcome:	The risk management framework effectively manages the risk that the licensee does not maintain effective service standards
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations

8.1	Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system	2	Through enquiries held with the Risk and Audit Manager, the Pilbara Regional Safety Advisor, Regional Managers from the Pilbara and Kimberley region and review of the key risk management documentation we noted that:
			• Horizon Power's risk appetite has been set at "medium", as per its corporate risk matrix, where all risks rated higher than medium are considered outside of Horizon Power risk tolerance and require action to reduce exposure. Where the exposure relates to safety risks, the Board requires that Horizon Power demonstrate that the exposure is reduced to the more conservative of the following: as low as reasonably practicable (ALARP) or good industry practice.
			• There are established risk management policies and procedures that provide direction and guidance including:
			  ○ Risk management Policy
			  ○ Risk management Framework
			  ○ Risk Framework Matrices
			• There is a formalised timeline for reviewing risks as identified in the Corporate Risk Assessment Process Timeline document.
			• Corporate risks are managed through the CURA system, and the review team examined an extract of the risks in CURA that relate to the asset portfolio.
			• Risk assessments are performed by site-based staff to identify and assess asset failure risks as they arise. Risks identified and assessed above prescribed thresholds are escalated to Asset Managers, then to Regional Managers and captured in Operational risk registers and/or in regional contingency plans. Both external and internal risks are recorded in the corporate and operational risk registers.
			• Training is provided to all new staff to ensure that risk policies and procedures are understood and can be applied to minimise internal and external risks. Refresher training is provided to all staff on a three yearly basis to coincide with when the risk management policy and framework are updated.

			Process and Policy Rating: A	Performance Rating: 1
8.2	Risks are documented in a risk register and treatment plans are implemented and monitored	4	Through enquiries held with the Risk and Audit Manager, the Pilbara Regional Safety Advisor, Regional Managers from the Pilbara and Kimberley region, the Senior Asset Framework Engineer and review of the Risk Registers and Treatment Plans, we noted that: • At the divisional level, Division EGMs are responsible for managing strategic risks. All divisional level risks are reviewed and updated annually and managed in CURA. The review team viewed the CURA risk register for cyber security attacks. • AMP projects and programs are risk assessed by the Regional Asset Managers using the Risk Value Matrix (RVM) and the corporate risk assessment matrix. This RVM assessment is then verified by the Senior Asset Framework Engineer to ensure it is applied consistently across the organisation. • Operational risk registers are updated quarterly to reflect changes to the risk profile, controls, and ownership and are the responsibility of the Regional Manager. • Projects are funded using this risk-based approach and the resulting accepted risks associated with the unfunded projects are documented. • Hazards and incidents are logged in the Cintellate system. These are typically discussed at pre-start meetings the following day; more notable risks will be investigated, and mitigation activities actioned as required. These are reviewed at the monthly regional safety meeting. The system automatically issues reminders for noted actions 7 days prior to when they are due.	
			Process and Policy Rating: A	Performance Rating: 1
8.3	Probability and consequences of asset failure are regularly assessed	2	Through enquiries and walkthroughs held with the Risk & Audit Manager, Senior Asset Services Manager, Regional Managers from the Pilbara and Kimberley, and review of the relevant documentations and processes we noted that: • Horizon Power's Risk Management Framework and Risk Management Policy are reviewed and updated on a three yearly basis. Horizon Power undertook a review and update of their risk assessment criteria as part of their 3 year cyclical risk framework review. The likelihood and consequences where bench marked against industry practice, updated through internal SME input workshops and through the use of models. Horizon Power use a Volume of Lost Load Model (VoLL), which considers the full asset base and the most recent load data. This calculation also uses the Values of Customer Reliability (VCR) values published by the Australian Energy Regulator. The VoLL model is used to provide a service interruption value, based on time, for the NWIS and other distribution networks for Horizon Power. This forms the basis of the Service Interruption category on the consequence table. • It is noted that the RVM process allows users to add real likelihood and consequence values for specific projects.	

			• Performance objectives as detailed in the NSPO are communicated to Building and Energy on quarterly basis and updated on an annual basis. Performance is actively monitored throughout the year with all incidents reviewed and investigated, with corrective actions developed and may trigger an update to asset class strategies and maintenance and replacement practices. In cases where asset performance targets are not met, specific asset interventions will be initiated. • Risk management activities are driven by the Divisions and summarised by the Corporate Risk team to Risk management activities are driven by the Divisions and summarised by the Corporate Risk team to present to the Audit and Risk Management Committee (ARMC). The ARMC has accountability for ensuring risk management practices are established and provide oversight of the risk management framework and practices. The Operating Division GMs have overarching responsibility for ensuring that the risk management process has been embedded throughout the organisation. Roles have been formally captured within the Risk Management Framework document. Business risks are reviewed through an annual process with treatment plans initiated where required. • Asset performance is reported on a monthly basis through the Asset Management Report. Identified trends in this data may trigger a review of the failure & consequence of asset failure. • A detailed review of the performance of each asset class occurs during the five-yearly reviews of the Asset Class Strategy documents, this may also result in changes to asset class strategies and maintenance and replacement practices. • Asset condition is tracked through regular scheduled inspections, and any anomalies are recorded with evidence and failure data captured which may trigger asset performance analysis and where required local or organisation wide investigations. An example of this is the Broom LV Frame failure incident. . A review of equipment of the same design across the state was undertaken to confirm if the isolated failure event may prove to become a systemic issue. In this case it was determined that the structures proximity to a desalination operation and failure of the enclosure to perform its intended function to ensure the integrity of the LV equipment was the primary case for the accelerated asset deterioration. Two key actions from this incident was to identify all sites where this existing LV equipment is located and perform a one-off condition assessment of both the LV equipment and enclosure as well as to implement an operating restriction at each of these sites. A further finding of the investigation was to include an update to the maintenance checklist to include more specific requirements for the inspection and condition assessment of the equipment and enclosure conditions with further prompters built in and examples from the DACAG.. In summary, it was observed that Horizon Power do not just rely upon age or time-based indicators to predict asset failure, but account for environment, operating conditions, etc to more accurately predict failure probability, in this case, failure probability was heightened relative to other assets in different environments/geographies. Furthermore, consequence is addressed through asset criticality assessments and the impact of failure on the network/operations. • The Regional Asset Managers review their risk profile regularly and are able to request changes to their funded program in order to address a change to their risk profile.

			• We reviewed a sample of proposed maintenance programs in PlanView and noted that projects were risk assessed using the Risk Value Movement (RVM) underpinned by the corporate risk assessment matrix. This RVM assessment is then verified by the Senior Asset Framework Engineer to ensure it is applied consistently across the organisation and acts a gatekeeper prior to group challenge sessions to standardise the scoring process. The RVM adopts the corporate risk assessment framework for consistency and best practice, however, it also includes features to manually enter calculated probabilities and consequences to provide a more refined analysis and greater risk assessment accuracy.	
			Process and Policy Rating: A	Performance Rating: 1

4.9. Contingency Planning

Key Process	Contingency plans document the steps to deal with the unexpected failure of an asset.
Outcome:	Contingency plans have been developed and tested to minimise any major disruptions to service standards.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks	2	Through enquiries and walkthroughs held with the Senior Manager Asset Services, the Regional Asset Managers (Pilbara and Kimberley Region) and Senior Manager of Technology and Shared Services along with a review of supporting documentation and contingency management processes, we note that: • Contingency is built into the network design (N-1) and the Network Rules via engineering controls to reduce the impact of unplanned events: The Review team was stepped through the measures in the Pilbara network rules including a line drawing of the "three islands" in the Pilbara Region, specifically Port Hedland, Cape Lambert, and Karratha. The (global) Pilbara network can be partitioned into three local/isolated networks (islands) via connection/disconnection procedures. This islanding scheme provides mitigation and helps control system failures so that the connection between islands can be disconnected to prevent a cascading complete network failure and prevent damage to equipment. Protection maintenance is scheduled to ensure the islanding scheme can be effectively deployed if necessary. • When discussing the "Island Scheme", all interviewees appeared to have a detailed understanding of the scheme, it's importance and knowledge of its operation. As such, the scheme was able to be explained in simple terms to the Review team and easily understood. • Business continuity risks are identified and assessed by each division as part of the Business Continuity Management Framework. The Crisis and Emergency Management Handbook details the principals to be followed should any incident cause or threaten to cause a serious business disruption. • Formal third party independent testing of contingency planning occurs on a two-yearly cycle. This two-yearly testing can be in the form of a practical exercises and a report is provided at the conclusion of the exercise detailing the areas of best practice, learnings and opportunities for improvement. During the Review period a cyber security attack exercise was undertaken. • Fire evacuations are carried out on a scheduled basis with support from an independent workplace emergency solutions organisation. A report detailing observations from the activity is provided and we noted that observations include the process undertaken, notes on performance of staff and wardens, time to evacuate, and improvement opportunities. • On examination of the region-specific contingency management plans, we noted that that these plans are documented, and an annual desktop review and update is undertaken. This annual review occurs pre-

			cyclone season to ensure that the updated plan incorporates lessons learnt from the previous year and key contacts and checklists are updated. Stakeholders from across the organisation are engaged to update and consolidate into the plan to ensure that all information is updated prior to cyclone season. • The contingency plans address strategic spares requirements, and each plan contains a register detailing the minimum number of strategic spares to be held in the Region. In addition, agreements between regions within Horizon Power, and with other external utility organisations are in place to provide certain spares that are not stocked within the region. • We note that the strategic spares requirements are updated based on lessons learnt. This occurred during the Review Period in the Kimberley region. In this example there was a multi-day outage at a small community outside Derby. Due to difficult weather conditions, it took 4 days to reinstate power and during that time the town had to be evacuated. At that time the Kimberley region did not own a mobile generator. The region was able to justify the purchase of a mobile generator that is now stored inside and tested monthly to confirm that the asset is available to be deployed if required. • The regional contingency plans will be updated when new critical assets are added to the portfolio. The review team notes that this occurred in the Pilbara region when in 2021 two transformers in Wedgefield were replaced with one. This was identified as a risk and was added to the contingency plan. • We examined minutes from the Pilbara Local Emergency Management Committee and the report on the Pilbara Pre-season preparedness tour and we note it is clear the contingency plans are communicated and understood.	
			Process and Policy Rating: A	Performance Rating: 1

4.10. Financial Planning

Key Process	Financial planning brings together the financial elements of the service delivery to ensure its financial viability over the long term.
Outcome:	The financial plan is reliable and provides for the long-term financial viability of the services.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations	
10.1	The financial plan states the financial objectives and strategies and actions to achieve the objectives	4	Through enquiries held with the Financial Analytics & Performance Lead and examination of Horizon Power's financial planning and reporting documentation, we noted that: • Financial objectives are captured in section 3.2 of the Statement of Corporate Intent (SCI). The strategies to achieve the objectives are outlined in section 3.3 and include a set of strategic projects and key performance indicators. Section 6 details the approved asset investment programs and include the Asset Management Plan along with other key strategic major projects. The SCI is prepared on an annual basis and submitted to the Minister for Energy. • We reviewed the Corporate Budget which is the key financial plan and is developed annually. • A full financial budget and plan is submitted yearly by each Operating Division, detailing projections for OPEX and CAPEX spends. • The annual budgets are guided by the Corporate Budgeting Policy. This policy outlines Horizon Powers intentions to produce accurate and justifiable budgets that meet stakeholder requirements, provide decision makers with sufficient details to enable informed business decisions, and comply with all applicable laws.	
			Process and Policy Rating: A	Performance Rating: 1
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs	5	Through discussion with the Financial Analytics & Performance Lead and examination of Horizon Power's financial planning and reporting documentation, we noted that Horizon Power has identified the following sources of funding for capital and recurrent costs: • Department of Treasury allocations. • Customer Funded projects and private agreements. • Federal grants (to fund for example the deployment of renewable energy solutions) • Other Government programmes and agreements (e.g., Royalties for Regions) Funding sources are noted in the Corporate Budget, Statement of Corporate Intent, and the Strategic Asset Plan.	
			Process and Policy Rating: A	Performance Rating: 1

10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	5	Through enquiries held with the Financial Analytics & Performance Lead and examination of Horizon Power's financial planning and reporting documentation, we noted that: • Horizon Power publishes an Annual Report each year on their external facing website. The 'Annual report 2022-23' was reviewed and it is noted that this report includes the balance sheet and profit and loss statement. • In addition to this, the organisation also provides an Interim report to the Minister in December each year. The interim report dated December 2023 was reviewed and it is noted that it included an interim profit and loss statement with accompanying commentary, including a summary of any variance. This interim business performance report ensures that the organisations key stakeholder, the Minister, is aware of the operating projections.	
			Process and Policy Rating: A	Performance Rating: 1
10.4	The financial plan provides firm predictions on income for the next five years and reasonable indicative predictions beyond this period	5	Through enquiries held with the Acting Manager Finance and examination of Horizon Power's financial planning and reporting documentation, we noted that: • The Statement of Expectations provides projections for the next five years in the form of a profit and loss statement and cash flow statement, and a summary of payments or subsidies received from the government to provide community service obligations, forecast over five financial years. • The Corporate Budget includes relevant detail on OPEX and CAPEX costs, profits, and expenses. • The Strategic Asset Plan is updated annually and provides a rolling 10-year forecast of P1, P2, R1 & R2 expenditure across the organisation as well as detailed justification and drivers for the asset management work to be undertaken.	
			Process and Policy Rating: A	Performance Rating: 1
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	5	Through enquiries held with the Financial Analytics & Performance Lead and Senior Manager Asset Services, and examination of Horizon Power's financial planning and reporting documentation, we noted: • The Statement of Corporate Intent provides a summary of the asset investment plan for the next five financial years. • The annual corporate budget provides further detail. The corporate budget provides for the operations, maintenance, administration and capital expenditure and some examples of the items costed in the budget include labour, materials and plant, services (consultants, training, recruitment), travel and overheads, as well as costs attributable to each of the four key maintenance types (P1 – Planned preventative maintenance, P2 – Planned corrective maintenance, R1 – Reactive maintenance breakdowns / faults & R2 – Reactive corrective maintenance). • Strategic Asset Plan provides a 10-year forecast of P1, P2, R1 & R2 expenditure across the organisation as well as detailed justification and drivers for the asset management work to be undertaken.	
			Process and Policy Rating: A	Performance Rating: 1

10.6	Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	4	Through discussions with the Manager Asset Services, the Financial Analytics & Performance Lead, the Region Managers in the Pilbara and Kimberley Region and an examination of relevant budget analysis information, we noted that: • A Financial summary report is provided to the Minister for Energy on a twice-yearly basis in the form of an interim and final report. • The monthly reports track maintenance costs attributed to the maintenance categories (P1, P2, R1 & R2) as well as non-maintenance costs (inclusive of materials, consultants, felt, travel and property expenses and overheads). The budgeted and actual costs are compared, and notable variances identified. • The organisation has a repository of costings for standard maintenance jobs. In circumstances where a workorder cost exceeds the budgeted costs a review will be undertaken to determine the reasons for the variance and if corrective actions need to be undertaken. Dependent on the value of a project, a large cost over/under run will be escalated to the project board for review and action. • The review team examined the Pilbara Regions' Opex Finance Report for the period of March 2024 note that project budget, actuals, variance were tracked and reported for the reporting period and across the full year. Detailed commentary is provided for any areas where the variance was under of over the planned by more than 10%. The report also shows a summary of planned and actual expenditures broken down to a P1, P2, R1 & R2 level. • Where variances of greater than ± 10% of the planed costs are identified, a change request must be actioned and approved by management. We note that in the Pilbara region, they returned to treasury last financial year to request an additional OPEX allocation as the costs to undertake work in the region had escalated beyond what was budgeted.	
			Process and Policy Rating: A	Performance Rating: 1

4.11. Capital Expenditure Planning

Key Process	The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure on each over the next five or more years. Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates
Outcome:	The capital expenditure plan provides reliable forward estimates of capital expenditure and asset disposal income. Reasons for the decisions and for the evaluation of alternatives and options are documented.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations
11.1	There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates.	4	Through enquiries held with the Acting Manager Finance, the Senior Manager Asset Services and consideration of Horizon Power's CAPEX processes, we noted that: • A CAPEX plan is managed in the PlanView system, based on consolidated figures by each Operating Division and include specifics for each approved project including key driver, scope, % local expenditure, the Risk Value Movement calculation, and total expenditure for the current and future years. • After the capital expenditure plan is approved, a presentation to the Executive is developed to communicate the risks the organisation is accepting as a result of the unfunded projects. • All CAPEX projects are consistently developed and managed system called PlanView. The review team was provided a walkthrough of PlanView to see the functionality and notes that projects include scope, required actions, planned dates for the actions and responsible project manager.
			Process and Policy Rating: A — Performance Rating: 1

11.2	The capital expenditure plan provides reasons for capital expenditure and timing of expenditure.	4	Through enquiries held with the Acting Manager Finance, the Manager Asset Services and consideration of Horizon Power's CAPEX processes, we noted that:
			• All capital projects valued over $5M require a business case that address the following:
			  ○ Alignment to strategy
			  ○ Benefits
			  ○ Financial Impacts
			  ○ Risk Impacts
			  ○ Business Readiness
			  ○ Resource Impacts

			• Project scope, timing and justifications are independently reviewed by the Investment Review Committee prior to the project being presented to the executive for endorsement. • The Region specific 2021/30 Capital Asset Management Plans contained in PlanView contain high level justification for projects and include information on each project's key driver, Risk Value Movement (RVM) and cost.	
			Process and Policy Rating: A	Performance Rating: 1
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	4	Through enquiries held with the Financial Analytics & Performance Lead, the Senior Manager Asset Services and consideration of Horizon Power's CAPEX processes, we noted that: • Asset Class Strategies provide detailed guidance on end-of-life decisions for each asset type. The strategies will typically include a risk-based approach to asset renewal and replacement options. This analysis will then inform the scope of CAPEX projects. • The Asset Management Reports may trigger the development of a CAPEX investment decision, based on the performance trends identified for a specific asset and/or region. • Risk registers – risk treatment plans may require CAPEX projects to be conducted to manage identified risks. The review team saw an example of this in the reactor coil replacement project in the Pilbara region. The reactor coils were at the end of service life and had to begin to fail. At failure the coils ejected molten metal. A replacement program was developed to address this risk. • An Investment Review Committee provides governance and due diligence for HP's major capital expenditure and growth opportunities. This committee meets only monthly basis and provides an independent functional assessment, review, and endorsement that Business Cases are 'decision ready'. This review function in part ensures that projects are aligned to business needs.	
			Process and Policy Rating: A	Performance Rating: 1
11.4	There is an adequate process to ensure that the capital expenditure plan is regularly updated and actioned	5	Through enquiries held with the Financial Analytics & Performance Lead, the Senior Manager Asset Services and examination of Horizon Power's CAPEX plans, we noted that Horizon Power have a rolling 10 year Asset Management Plan with built in flexibility to ensure remerging risks can be effectively managed: • The CAPEX budget is approved annually as part of the Asset Management Plan (AMP) process Once the AMP is approved, there is the opportunity for Regional Asset Managers to make peer reviewed adjustments on a quarterly basis in order to address a newly identified change to their Region's risk profile. • Monthly Project Management Reports (PMRs) are required for CAPEX projects and are used to track project milestones and scope changes. Any proposed changes (scope, timing, expenditure, risk profile) are reviewed and approved. Where a project is anticipating a change in cost, scope of timing of ±10% of the approved business case, then a change request will be triggered and justification for the change needs to be provided by the project manager to gain management approval. The authority to approve this change request will depend on the overall value of the project.	
			Process and Policy Rating: A	Performance Rating: 1

4.12. Review of AMS

Key Process	The asset management system is regularly reviewed and updated
Outcome:	The asset management system is regularly reviewed and updated.
Process and policy definition rating	A
Performance Rating	1

No	Effectiveness Criteria	Review Priority	Observations	
12.1	A review process is in place to ensure that the asset management plan and the asset management system described in it remain current	5	Through enquiries held with the Risk and Audit Manager, Senior Manager Asset Services and review of supporting asset management system documentation we noted that Horizon Power has review processes in place to ensure that the asset management plan and system remain current. These processes include: • The Strategic Asset Plan reviewed and updated on an annual basis. • Asset Class Strategies are reviewed on a five-yearly basis with all documents noting the last review undertaken and when the next review is due. We viewed several asset class strategies to confirm the review schedules were adhered to. • The Asset Manager and Works Delivery forum convenes key stakeholders together biannually to gather feedback and share knowledge. This informs the updates to the asset management system. • It was noted that Horizon Power cross-share knowledge with Western Power to update best practice, and work with other jurisdictional providers to improve asset management practice. • Internal and independent external reviews conducted on various elements of the AMS since last 2020's Review period. • Review actions from prior AMS reviews are entered CURA and tracked to completion. We viewed the CURA system and noted the completion of AMSR recommendations that were identified in the 2020 Review.	
			Process and Policy Rating: A	Performance Rating: 1
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system	5	Through enquiries held with the Risk and Audit Manager, Senior Manager Asset Services and review of the independent reviews performed of the asset management system, we noted the following: • Compliance and audit guide determines how Horizon Power conducts internal audits • A schedule for independent audits are undertaken across the whole organisation, the asset management system included. We viewed the schedule of independent audits undertaken during the review period and note that in addition to the regulatory required audits, Horizon Power also undertook an Asset Management Planning Operating Effectiveness audit in 2022/23 and an Operational works delivery management audit in 2020/21. • The findings from independent reviews are documented in CURA and actions tracked through this system to ensure any identified gaps are addressed.	

			• During the review, we observed the interactions between the asset management team and the risk and audit team. The risk and audit team acted in an appropriately independent and collaborative manner. It was clear that the risk and audit team placed great importance in compliance and cooperation with audit procedures. The review team received seamless document delivery, complete cooperation across the organisation and observed a notable focus and culture by all interviewees on the importance of compliance and adhering to procedures, including from senior management to operations staff.	
			Process and Policy Rating: A	Performance Rating: 1

Appendix 1

Licensee's representatives who participated in the Review

The table below outlines key personnel who were involved in discussions and contributed to the findings detailed in this AMS Review Report.

#	Name	Role Title
1	Steve Lillis	Senior Asset Service Manager
2	Hilton Bennie	Asset Services Delivery Manager
3	Liang Tay	Audit Manager
4	Prachi Goel	Risk and Audit Specialist
5	Shane Kiramage	Financial Analytics & Performance Lead
6	Noel Moyo	Regional Manager Pilbara Region
7	David Keating	Regional Manager, Kimberley Region
8	Jeff Campbell	Senior Manager Technology Shared Services
9	Bill Bignell	Senior Asset Frameworks Engineer
10	Miranda Bowman	Pilbara Regional Safety Advisor
11	Wayne Karslake	Acting Works Delivery Manager, Pilbara East
12	Michael Maguang	Acting Asset Manager, Pilbara East
13	Muddi Nazir Ahmed	Asset Manager, Kimberley Region
14	Mark Roberts	IT Service Delivery Manager
15	Johan Esterhuizen	System Performance Manager
16	Machaela Milburn	Program & Portfolio Management Director
17	Andy Neeman	Asset Systems Manager
18	Shane Kiramage	Financial Analytics & Performance Lead
19	Maurice Ryan	Senior Manager System Operations
20	Jodie Lynch	Program Coordinator - Apprentices, Grads
21	Shane O'Byrne	Technical Training Coordinator
22	Vi Garrod	Acting Executive GM Business Development & Strategy
23	Steve Kenny	Acting Senior Manager Future Energy Systems
24	David Stephens	Senior Manager System & Network Planning
25	Frendy Frendy	Acting Senior Manager System and Network Planning
26	Brett McPharlin	Contract Delivery Manager, Kimberley Region
27	Bobby Garande	Senior Power Systems Officer, Kimberley Region
28	Daniel Kippin	Senior Manager Sustainability
29	Jeff Bertolucci	Commissioning Manger
30	Dune Sookloll	Cyber and Information Security Officer
31	Suresh Parimi	Senior Manager Digital & Data Transformation

Appendix 2

Key Documentation and information sources

The table below outlines all documents used in this Review Report.

Document Name
Continuous improvement section of Strategic Asset Plan - FY24
Continuous improvement section of Strategic Asset Plan - FY25
CURA REPORT - Full Task Report - 2020 AMSR
DM# 41673070 - Asset Management System Framework Description
AM OE internal Audit - Task Report extract from CURA [11 Jun 2024]
EPD - ENSMS UPDATE - AUDIT AND RISK MANAGEMENT COMMITTEE SUBMISSION -2023 (final)
ENSMS Compliance Assessment progress report April 2024
Operational Works Delivery Management (OWDM) Internal Audit Report (final)
[Full Report] HP - Asset Management OE Report
220715 FINAL Horizon Power - ENSMS Compliance assessment review Memorandum
AM OE internal Audit - Task Report extract from CURA [11 Jun 2024]
East Pilbara FY25 CAPEX Presentation
QBR Meetings across a full financial year including accompanying presentations and reports
HP Investment Review Committee - Terms of Reference (ToR)
1. - May 2024 - IRC Submission
IRC Feedback - Flexible SPS Acceleration Project.docx'
Asset Class Strategy Stand Alone Power Systems
Asset Class Strategy Transformers
Asset Management Report April 2024
P&PM - Project Management Methodology - Playbook
Numerous meeting minutes for the Quarterly Business Review meetings across FY 22 & FY 23
PlanView system demonstration
Horizon Power Statement of Corporate Intent
Strategic Asset Plan
Business Planning Playbook
Annual Report
Budget cycle
Corporate Budgeting Policy
(2023)+horizon+power+statement+of+corporate+intent
annual-report-2022-23
Strategic Asset Plan 24
Interim_Business_Performance_Report December 23_(Minister)
Corporate Budgeting Policy
Strategic Asset Plan - FY25
Operations EPD Opex Report
Opex Finance Report - Kimberley - April 2024

Opex Finance Report - Pilbara - Mar 2024
Pilbara April PL
Pilbara Operations EPD Opex Report
Crisis and Emergency Management Handbook
Business Continuity Management Framework
Horizon Power Bentley Evacuation Exercise Report 090523 – PDF
2024 - JAN - Fleet and Property Contingency Plan Desktop Review
2023 - NOV - Pilbara Network Contingency Plan Desktop Review
2023 - NOV - Esperance Network Contingency Plan Desktop Review
2023 - NOV - Gascoyne Network Contingency Plan Desktop Review
2023 - NOV - Kimberley Contingency Plan Desktop Review
AMS Module 8 - Contingency Planning
Contingency Plan Template
Contingency Plan Desktop Test Report - Template
Pilbara Network_CONTINGENCY_PLAN V3.doc
Kimberley Distribution Network Contingency Plan 2022
GASCOYNE_NETWORK_CONTINGENCY_PLAN_(HP_14289431)_Latest
ESPERANCE - ESPERANCE DISTRICT CONTINGENCY PLAN
Pandemic Response Plan - Properties & Fleet
Risk management Framework
Risk management Policy
Risk Framework Matrices
2023 Annual Corporate Risks - June 23
Corporate Risk Assessment Process Timeline – 2024
Risk Management Training (final) Dec 2020
PH - Pilbara Safety Day - April 24 - March 24 reporting period Presentation
Incident_INC-0007614 - Carnarvon 22kV PTS flashover Summary - Cintellate extract
35-A22-23 - Flash Alert - Horizon Power Light Vehicle Fire Broome
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Domain Password Policy.png
Information Technology Policy and Guidelines
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Master & Reference Data Management
Metadata Guideline
SUMMARY OF ASSET DATA MANAGEMENT AND QUALITY IMPROVEMENTS SINCE 2020
Information Technology Backup Policy
Data Stewardship and Custodian Guideline
Asset Data Process Owner and Data Steward Register
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SUMMARY OF ASSET DATA MANAGEMENT AND QUALITY IMPROVEMENTS SINCE 2020
HPC-9QK-29-0001-2021 Data Standard Ellipse - Productive Unit Hierarchy
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HPC-9QK-29-0006-2022 PU Hierarchy Diagram - Distribution
HPC-9QK-29-0008-2022 PU Hierarchy Diagram - Transmission

HPC-9QK-29-0009-2023 PU Hierarchy Diagram - SPS
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Data Stewardship and Custodian Guideline
Domain Password Policy
PowerLink - Data Governance
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SOMS - EXTRACT - SUBSTATION VISITOR LOG
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AMR_-_Asset_Management_Report May 2024
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05. TDT Performance slides - May 2024 Reporting Period
PowerLink Pages - Asset Data Quality Measures 1
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Asset Class Strategy Transformer
AMP Instruction Module 7 Maintenance Tactics
Asset Class Strategy Standalone Power Systems
MST Frequencies Guidelines
AMP INSTRUCTION MODULE - NO 5 RELIABILITY AND QUALITY (HP_3367166)
Asset Condition Management Quick Reference Guide
Defect Management Process (Extract from Works Management Process)
Maintenance Work Delivery Management Overview - Governance and Process
Standard Work Packages
Basic MST Change Control Process - Process Information - Published
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Basic MST Change Control FAQ
PH - P1 - SUBSTATION INSPECTIONS.ZIP
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PH - P2 -PH - P2 - EP022022 - REMOVE ANT NEST FROM HARRIER TX.zip
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Demonstration of Ellipse
Demonstration of PlanView
Demonstration of FeildReach

Technical Maintenance Guide
Shallow Cables - Port Hedland - Underground Cable Risk Review and Options Report
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DM#43832974- Derby Analysis
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Fault Categorisation Framework
Fault Management Process (Extract from Works Management Process.pptx
TCS Fault Report Cheat Sheet - Field Crew
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PH - AMP - MST's 5years v8
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Switching Process and Rules
System Operations Framework - Rev 1
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Faults Categorisation #4839362
OSH-4.2-1-01 Incident Management Procedure
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WFD 555.0 Munda feeder
AST 508.0 Anderson feeder
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ENGINEERING GRADUATE PROGRAM GUIDELINES
V1 Traineeship Program Guidelines
V2 Apprenticeship Program Guidelines
Strategic Asset Plan - FY24
Strategic Asset Plan - FY25
Operational Environment and Heritage Management Plan 2024
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HP Ops Performance - Customer Interruptions
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Horizon Power ComputerShare customer SLA Report May 2024
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License Performance Audit 2020 2023 -report-EIRL2-Horizon-Power
statement-of-network-safety-performance-objectives-2023
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AMP INSTRUCTION MODULE - NO 5 RELIABILITY AND QUALITY (HP_3367166
Asset Class Strategy – Overhead Support Structures
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FI 8.14 - Storage, Handling, Transport and Disposal of Sulphur Hexafluoride (SF6) Gas
INTERIM INSTRUCTION AMS 2023-002 - RMU AND SF6 DISPOSAL WITH HAZRAD
FI 11.08 - Controlled Waste
FI 2.32 - Dangerous and Explosive Goods
FI 11.03 - Treated Poles
FI 10.07 - Transformer - Return and Refurbishment
THE ASSET DISPOSAL_WRITE-OFF FORM - Corney DTTX replacement
THE ASSET DISPOSAL_WRITE-OFF FORM - Low Gas Port Hedland Wharf RMU replacement
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Client Funded supply Upgrade via changing open ports (suit of supporting documents for this job)
Munda Feeder documentation
Project Handover Report and Certification
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Renewable asset integration – PowerLink pages showing project lifecycle
EP019787 Commissioning Sheet LV Cables
EP019787 Commissioning Sheet LV_Kiosk
EPS0053 Commissioning sheets - LV Cables with-without Pillars or Pits
EPS0053 Commissioning sheets - Steel Standard Streetlights (3 forms)
WKP0561 distribution transformer & HV cable Testing sheets
WKP0566 WK023765 LV Cable Testing sheets
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WKP0566 WK023765 Work Order Task - Job Card
EPS0053 EP018346 Work Order Task - Job Card
WKP0561 Work Order Task - Job Card
MEEKATHARRA MID WEST SOLAR SUBFOLDER - Commissioning plan, Inspection & test plans, Inspection & test reports and HV network commissioning sheets
Wedgefield Contingency Overload SUBFOLDER - a selection of - Commissioning plans, Inspection & test plans, Inspection & test reports, Notice of Intended Works, Permits
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Asset Management Strategy 2023 – 2028 dm#2772490 (published Oct 2023 – 5-YR review frequency)
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Cue FES Plan 2022
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Appendix 3

Risk Assessment Supporting Tables

The consequences of the risk occurring was assessed using the 3-point rating scale described in the table below, sourced from the Electricity Compliance Reporting Manal (2023). The more significant the consequences, the higher the rating value allocated.

Table 7: Consequences

Rating Type	Classification of Non-Compliance	Criteria for Classification
1	Major	• The consequences of non-compliance will cause major damage, loss or disruption to customers. or • The consequences of non-compliance will endanger or threaten to endanger the safety or health of a person.
2	Moderate	• The consequences of non-compliance will affect the efficiency and effectiveness of the licensee's operations or service provision, but will not cause major damage, loss or disruption to customers. or • The regulatory obligation is not otherwise classified as Type 1 or Type NR non-compliance. Reclassification of Type 2 to Type 1 may occur in circumstances of • systemic non-compliance.
NR[2] (Not reportable	Minor	The consequences of non-compliance are relatively minor – i.e. non-compliance will have minimal effect on the licensee's operations or service provision and do not cause damage, loss or disruption to customers. • Compliance with the obligation is immeasurable. • The non-compliance is required to be reported to the ERA under another instrument, guideline or code. • The non-compliance is identified by a party other than the licensee. or • The licensee needs to use only its reasonable or best endeavours to achieve compliance, or the obligation does not otherwise impose a firm obligation on the licensee. Reclassification of Type NR to Type 2 may occur in circumstances of: • systemic non-compliance or • a failure to resolve non-compliance promptly.

[2] For the purpose of the annual compliance report, compliance obligations classified as Type "NR" are not reportable. They will be assessed during the independent performance audit.

The likelihood was assessed using the 3-point rating scale described in the table below:

Table 8: Likelihood

	Level	Criteria
A	Likely	Non-compliance is expected to occur at least once or twice a year
B	Probable	Non-compliance is expected to occur once every three years
C	Unlikely	Non-compliance is expected to occur once every 10 years or longer

The inherent risk was arrived through the combination of the consequence rating and the likelihood rating. The inherent risk rating that was used is depicted in the table below:

Table 9: Inherent risk rating

Likelihood	Consequence		
	1. Minor	2. Moderate	3. Major
A. Likely	Medium	High	High
B. Probable	Low	Medium	High
C. Unlikely	Low	Medium	High

Described below are the inherent risk ratings:

Level	Description
High	Likely to cause major damage, disruption or breach of licence obligations
Medium	Unlikely to cause major damage but may threaten the efficiency and effectiveness of service
Low	Unlikely to occur and consequences are relatively minor

Once the inherent risks were identified and classified, KPMG undertook a high level assessment of the internal controls that are in place to mitigate each inherent risk.

The table below describes the preliminary adequacy rating for existing controls:

Table 10: Adequacy of existing controls

Level	Description
Strong	Controls that mitigate the identified risks to a suitable level
Moderate	Controls that only cover material risks; improvement required
Weak	Controls are weak or non-existent and do little to mitigate the risks

The next stage in the planning process was to determine review priorities for each of the licence conditions based on the combined rating for inherent risk and control adequacy. The prescribed 5 - level audit priority scale was used:

Table 11: Priority Rating

		Preliminary Adequacy of Existing Controls		
		Weak	**Moderate**	**Strong**
Inherent Risk	**High**	Review priority 1	Review priority 2	
	Medium	Review priority 3	Review priority 4	
	Low	Review priority 5		

Appendix 4

Priority Ratings

1		Asset Planning
Key Process:		Asset planning strategies focuses on meeting customer needs in the most effective and efficient manner (delivering the right service at the right price)
Outcome:		Asset Planning is integrated into operational or business plans will establish a framework for existing and new assets to be effectively utilised and their service optimised

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
1.1	Asset management plan covers the processes in this table	Moderate	Probable	Medium	Moderate	Priority 4
1.2	Planning process and objectives reflect the needs of all stakeholders and is integrated with business planning	Minor	Probable	Low	Moderate	Priority 5
1.3	Service levels are defined in the asset management plan	Minor	Unlikely	Low	Moderate	Priority 5
1.4	Non-asset options (e.g. demand management) are considered	Minor	Probable	Low	Moderate	Priority 5
1.5	Lifecycle costs of owning and operating assets are assessed	Moderate	Probable	Medium	Moderate	Priority 4
1.6	Funding options are evaluated	Minor	Probable	Low	Moderate	Priority 5
1.7	Costs are justified and cost drivers identified	Moderate	Probable	Medium	Moderate	Priority 4
1.8	Likelihood and consequences of asset failure are predicted	Major	Probable	High	Moderate	Priority 2
1.9	Asset management plan is regularly reviewed and updated	Moderate	Unlikely	Medium	Moderate	Priority 4

2		Asset Creation and Acquisition
Key Process:		Asset creation/acquisition is the provision or improvement of assets
Outcome:		The asset acquisition framework is economic, efficient and cost-effective; it reduces demand for new assets, lower service costs and improve service delivery.

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
2.1	Full project evaluations are undertaken for new assets, including comparative assessment of non-asset solutions	Moderate	Unlikely	Medium	Moderate	Priority 4
2.2	Evaluations include all life-cycle costs	Moderate	Unlikely	Medium	Moderate	Priority 4
2.3	Projects reflect sound engineering and business decisions	Moderate	Unlikely	Medium	Moderate	Priority 4
2.4	Commissioning tests are documented and completed	Major	Unlikely	High	Moderate	Priority 2
2.5	Ongoing legal/environmental/ safety obligations of the asset owner are assigned and understood	Major	Unlikely	High	Moderate	Priority 2

3		Asset Disposal
Key Process:		Asset disposal is the consideration of alternatives for the disposal of surplus, obsolete, under-performing or unserviceable assets.
Outcome:		The asset management framework minimizes holdings of surplus and under-performing assets and lowers service costs. The cost-benefits of disposal options are evaluated.

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
3.1	Under-utilised and under-performing assets are identified as part of a regular systematic review process	Minor	Probable	Low	Moderate	Priority 5
3.2	The reasons for under-utilisation or poor performance are critically examined and corrective action or disposal undertaken	Minor	Probable	Low	Moderate	Priority 5
3.3	Disposal alternatives are evaluated	Minor	Probable	Low	Moderate	Priority 5
3.4	There is a replacement strategy for assets	Moderate	Probable	Medium	Moderate	Priority 4

4		Environmental analysis
Key Process:		Environmental analysis examines the asset management system environment and assesses all external factors affecting the asset management system.
Outcome:		The asset management system regularly assesses external opportunities and threats and identifies corrective action to maintain performance requirements.

Ref	Effectiveness criteria		Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
4.1	Opportunities and threats in the asset management system environment are assessed		Moderate	Probable	Medium	Moderate	Priority 4
4.2	Performance standards (availability of service, capacity, continuity, emergency response, etc.) are measured and achieved		Moderate	Probable	Medium	Moderate	Priority 4
4.3	Compliance with statutory and regulatory requirements		Moderate	Probable	Medium	Moderate	Priority 4
4.4	Service standard (customer service levels etc) are measured and achieved		Moderate	Probable	Medium	Moderate	Priority 4

5		Asset operations
Key Process:		Asset Operations is the day-to-day running of assets (where the asset is used for its intended purpose).
Outcome:		The asset operations plans adequately document the processes and knowledge of staff in the operation of assets so service levels can be consistently achieved.

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
5.1	Operational policies and procedures are documented and linked to service levels required	Major	Likely	High	Moderate	Priority 2
5.2	Risk management is applied to prioritise operations	Moderate	Probable	Medium	Moderate	Priority 4
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	Moderate	Likely	High	Moderate	Priority 2
5.4	Accounting data is documented for assets	Moderate	Probable	Medium	Moderate	Priority 4
5.5	Operational costs are measured and monitored	Moderate	Probable	Medium	Moderate	Priority 4
5.6	Staff resources are adequate and staff receive training commensurate with their responsibilities	Major	Probable	High	Moderate	Priority 2

6		Asset maintenance
Key Process:		Asset maintenance is the upkeep of assets.
Outcome:		The asset maintenance plans cover the scheduling and resourcing of the maintenance tasks so that work can be done on time and on cost.

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
6.1	Maintenance policies and procedures are documented and linked to service levels required	Major	Unlikely	High	Moderate	Priority 2
6.2	Regular inspections are undertaken of asset performance and condition	Major	Probable	High	Moderate	Priority 2
6.3	Maintenance plans (emergency, corrective and preventative) are documented and completed on schedule	Major	Probable	High	Moderate	Priority 2
6.4	Failures are analysed and operational/maintenance plans adjusted where necessary	Major	Unlikely	High	Moderate	Priority 2
6.5	Risk management is applied to prioritise maintenance tasks	Major	Unlikely	High	Moderate	Priority 2
6.6	Maintenance costs are measured and monitored	Moderate	Unlikely	Medium	Moderate	Priority 4

7		Asset Management Information System
Key Process:		An asset management information system is a combination of processes, data and software that support the asset management functions.
Outcome:		The asset management information system provides authorised, complete and accurate information for the day-to-date running of the asset management system. The focus of the review is the accuracy of performance information used by the licensee to monitor and report on service standards.

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
7.1	Adequate system documentation for users and IT operators	Minor	Probable	Low	Moderate	Priority 5
7.2	Input controls include appropriate verification and validation of data entered into the system	Moderate	Probable	Medium	Moderate	Priority 4
7.3	Security access controls appear adequate, such as passwords	Major	Probable	High	Moderate	Priority 2
7.4	Physical security access controls appear adequate	Major	Probable	High	Moderate	Priority 2
7.5	Data backup procedures appear adequate and backups are tested	Moderate	Probable	Medium	Moderate	Priority 4
7.6	Computations for licensee performance reporting are accurate	Minor	Probable	Low	Moderate	Priority 5
7.7	Management reports appear adequate for the licensee to monitor license obligations	Minor	Probable	Low	Moderate	Priority 5
7.8	Adequate measures to protect asset management data from unauthorized access or theft by persons outside the organisation	Major	Probable	High	Moderate	Priority 2

8		Risk Management
Key Process:		Risk management involves the identification of risks and their management within an acceptable level of risk.
Outcome:		The risk management framework effectively manages the risk that the licensee does not maintain effective service standards

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Control Risk	Review Priority
8.1	Risk management policies and procedures exist and are being applied to minimise internal and external risks associated with the asset management system	Major	Probable	High	Moderate	Priority 2
8.2	Risks are documented in a risk register and treatment plans are implemented and monitored	Moderate	Probable	Medium	Moderate	Priority 4
8.3	Probability and consequences of asset failure are regularly assessed	Major	Probable	High	Moderate	Priority 2

9		Contingency Planning
Key Process:		Contingency plans document the steps to deal with the unexpected failure of an asset.
Outcome:		Contingency plans have been developed and tested to minimise any major disruptions to service standards.

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
9.1	Contingency plans are documented, understood and tested to confirm their operability and to cover higher risks	Major	Probable	High	Moderate	Priority 2

10		Financial Planning
Key Process:		Financial planning brings together the financial elements of the service delivery to ensure its financial viability over the long term.
Outcome:		The financial plan is reliable and provides for the long-term financial viability of the services.

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
10.1	The financial plan states the financial objectives and strategies and actions to achieve the objectives	Moderate	Probable	Medium	Moderate	Priority 4
10.2	The financial plan identifies the source of funds for capital expenditure and recurrent costs	Minor	Probable	Low	Moderate	Priority 5
10.3	The financial plan provides projections of operating statements (profit and loss) and statement of financial position (balance sheets)	Minor	Probable	Low	Moderate	Priority 5
10.4	The financial plan provides firm predictions on income for the next five years and reasonable indicative predictions beyond this period	Minor	Probable	Low	Moderate	Priority 5
10.5	The financial plan provides for the operations and maintenance, administration and capital expenditure requirements of the services	Minor	Probable	Low	Moderate	Priority 5
10.6	Large variances in actual/budget income and expenses are identified and corrective action taken where necessary	Moderate	Probable	Medium	Moderate	Priority 4

11		Capital expenditure planning
Key Process:		The capital expenditure plan provides a schedule of new works, rehabilitation and replacement works, together with estimated annual expenditure on each over the next five or more years. Since capital investments tend to be large and lumpy, projections would normally be expected to cover at least 10 years, preferably longer. Projections over the next five years would usually be based on firm estimates
Outcome:		The capital expenditure plan provides reliable forward estimates of capital expenditure and asset disposal income. Reasons for the decisions and for the evaluation of alternatives and options are documented.

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
11.1	There is a capital expenditure plan covering works to be undertaken, actions proposed, responsibilities and dates	Moderate	Probable	Medium	Moderate	Priority 4
11.2	The capital expenditure plan provides reasons for capital expenditure and timing of expenditure	Moderate	Probable	Medium	Moderate	Priority 4
11.3	The capital expenditure plan is consistent with the asset life and condition identified in the asset management plan	Moderate	Probable	Medium	Moderate	Priority 4
11.4	There is an adequate process to ensure that the capital expenditure plan is regularly updated and actioned	Minor	Probable	Low	Moderate	Priority 5

12		Review of AMS
Key Process:		The asset management system is regularly reviewed and updated.
Outcome:		The asset management system is regularly reviewed and updated

Ref	Effectiveness criteria	Consequence	Likelihood	Inherent Risk Rating	Controls Assessment	Review Priority
12.1	A review process is in place to ensure that the asset management plan and the asset management system described in it remain current	Minor	Probable	Low	Moderate	Priority 5
12.2	Independent reviews (e.g. internal audit) are performed of the asset management system	Minor	Probable	Low	Moderate	Priority 5

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