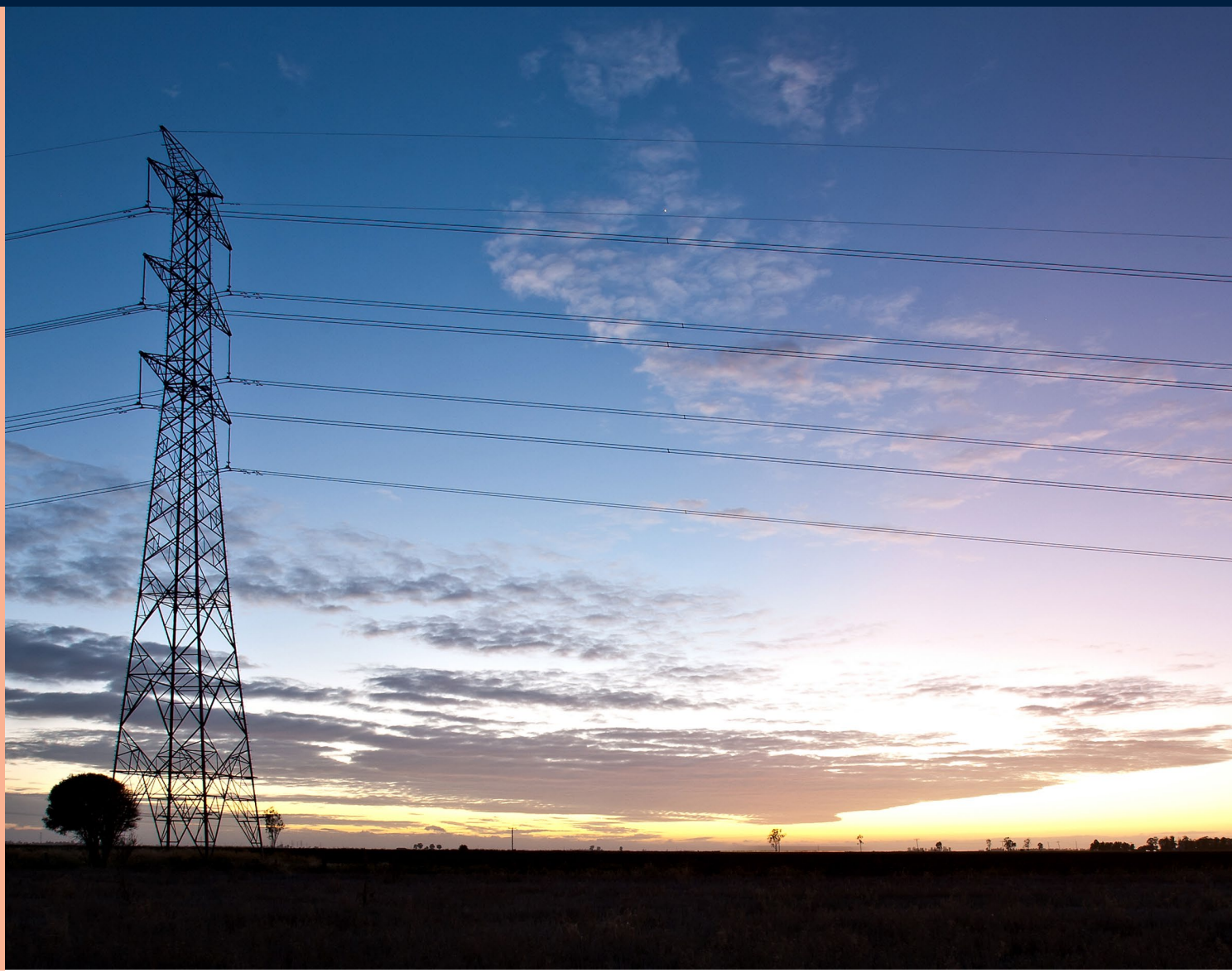
November 2023

Powerlink 2027-32 Revenue Proposal

Asset Maintenance Standard



Asset Maintenance – Standard

Policy stream	Asset Management	
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Reviewed by	General Manager Operational Engineering	
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Version History

Version	Date	Section(s)	Summary of Amendment
1.0	24/02/2011		New Document Template
2.0	08/09/2015		Reviewed - no change
3.0	12/01/2016		Reviewed - no change
4.0	23/06/2020		Reviewed - minor changes
4.1	13/11/2023		No content change, editorial update only

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1. Introduction

1.1 Purpose

This document sets out the policy adopted by the Powerlink Queensland for the maintenance of network assets. The objective of this standard is to establish the overarching principles which determine maintenance needs, plans and work.

1.2 Scope

The requirements of this standard apply to the maintenance of all network assets.

1.3 References

Document Code	Document Title
	Asset Management Framework
	Asset Management Policy
	Asset End of Life Policy
	Asset Refurbishment Policy
	ISO 55000 Asset Management Standards (International Standard for management of physical assets)

1.4 Defined Terms

Terms	Definition
RCM	Reliability-Centred Maintenance
VDM	Value Driven Maintenance
SAP	CMMS system

1.5 Roles and Responsibilities

Powerlink has adopted a "Distributed Asset Management" model to deliver its asset management activities, using the RAIDE-C (Recommend, Agree, Input, Decide, Execute and Communicate) accountability framework to communicate roles and responsibilities based on identified activities.

Who	What
SBD	Accountable of developing Maintenance Standard for implementation with the input from all divisions
OSD Field Services, Technical Network Solutions and Service Supply Partners	Accountable for ensuring that the Asset Maintenance is executed within their respective areas

1.6 Monitoring and Compliance

- Monthly Review of Maintenance Activities through reporting and meetings
- Quarterly ELT / SLT review in the progress of target and KPIs
- Annual reporting to the AER (RIN) maintenance reports which is also publicly available

1.7 Risk Management

There is an inherent risk to maintenance activities are not undertaken as per guidelines. This risk is mitigated by implementing quarterly desk top and field audits, and regularly maintenance forums.

2. Standard

2.1 Maintenance Strategy

Maintenance strategy shall be developed based on the principles of Reliability-Centred Maintenance (RCM). RCM provides a rigorous and auditable analysis framework for identifying maintenance activities that are applicable and effective in managing plant performance, including possible failures.

RCM analysis is a process of logically analysing the desired functions of plant or equipment, causes of functional failure, consequences of failure and the type of frequency of maintenance activities that best manage the associated risks. RCM shall be undertaken by facilitated review teams of technical experts and field personnel with the greatest knowledge of the network assets being analysed. RCM also identifies those failures that cannot be dealt with effectively by maintenance alone, and thus require other activities to manage, such as re-design.

2.2 Maintenance Planning

2.2.1 Objectives

It is Powerlink policy to maintain plant and equipment in service, and functioning correctly to the original design, for as long as it is economical and safe to do so. Work to achieve this objective is done under the categories of preventive or corrective maintenance, implemented in accordance with the maintenance strategy adopted through the application of Reliability-Centred Maintenance.

Work defined as maintenance is typically undertaken on a task level by a single technical workgroup in one geographical region.

Economies of scale are achieved by planning a number of single tasks at a common location (e.g. substation) or aligning tasks under the same planned network outage.

2.2.2 Planning Process

Maintenance planning is an ongoing and iterative process where needs are coordinated within and between plant areas.

RCM analysis is performed prior to the commissioning of plant and equipment as an input to the development of overall maintenance strategy, plans and budgets.

The outcomes of the RCM analysis are documented in Asset Management procedures and checklists as required by the particular maintenance activity.

Routine scheduled maintenance activities required from this analysis are defined as maintenance plans within SAP, from which the forward program of routine scheduled preventative maintenance is issued for execution by the relevant technical workgroup.

For non-routine maintenance activities (condition-based and corrective), Asset Management procedures define the conditions (i.e action and defect levels) under which plant or equipment requires preventive or corrective maintenance.

Annual maintenance budgets are formed through combining the forward program of routine schedules maintenance and forecasting of non-routine (preventative or corrective) expenditure based on historical trends.

2.3 Monitoring and Reporting

Routine monitoring and reporting processes should be established to monitor both the progress and expenditure associated with the maintenance of network assets.

Reporting shall be undertaken on an asset, workgroup and geographical level to enable effective monitoring of performance and targeted management response.

2.4 Maintenance Optimisation

Powerlink has started to implement Value Driven Maintenance (VDM) to optimise maintenance costs while taking into account health, safety and environment requirements balancing against risk requirements. VDM provides a risk based framework for quantifying the dominant failure modes (which are identified during RCM analysis in monetary terms). This assists the ranking of failure modes from high to lower risk and then compares this with the maintenance cost spent for each failure mode. This is used to run scenario analysis to find the optimal frequency for a maintenance strategy and identify "high cost- low value" activities for optimisation. VDM is applied to maintenance strategies over the life cycle of an asset, incorporates asset risk quantification and facilitates "what if" analysis based on cost vs benefit principles for different scenarios.

3. Distribution List

Divisional Distribution	Contact Details
Chief Executive	N/A
Delivery and Technical Solutions	N/A
Finance and Governance	Document Coordinator
Operations and Service Delivery	Document Coordinator
People and Corporate Services	N/A
Strategy & Business Development	Document Coordinator
Group/Team Distribution	**Contact Details**
OSD Field Delivery	GM
OSD Operational Engineering	GM
OSD Operational Support Services	GM
SBD Planning & Asset Strategies	GM
External Distribution	**Contact Details**
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