December 2025

Powerlink 2027-32 Revenue Proposal

Telecommunications Asset Strategy 2020-2027

Powerlink – Telecommunications Asset Strategy 2020-2027

Policy stream	Asset Management	
Authored by	Team leader Secondary Systems & Telecom Strategies	
Reviewed by	Manager Asset Strategies	
	Manager Telecommunications System	
	Manager Operational Technology Services	
	Manager Secondary Systems Field Engineering	
Approved by	General Manager Asset Management	

Version history

Version	Date	Section(s)	Summary of amendment
1.0	30/06/2020	All	Original version created to supersede Telecommunications Asset Strategy 2015 – 2022 (A2296978)
1.1	6/11/2023	All	Review was conducted and no changes required.
1.2	03/12/2025	2 and 3	Updated to reflect current state of network

Table of contents

1. Introduction

1.1 Purpose

This strategy provides an overarching direction for the organisation to use as the basis of significant decisions for all existing and future Telecommunications assets.

The principal asset management drivers for existing (and therefore replacement of) telecommunications assets are:

- Compliance – maintaining site safe work practices and a safe work environment.
- Operational, Obsolescence, Reliability – maintaining the telecommunications function with supported assets ensuring the HV network is operating correctly in line with the Digital Asset Methodology.

1.2 Scope

This document covers all operational telecommunications networks, platforms and support systems.

1.3 References

Document code	Document title
ASM-STR-A6095466	Strategic Asset Management Plan (SAMP)
ASM-I&P-FRA-A2287198	Powerlink - Digital Asset Management – Framework
A2959980	Horizon – a 10 year outlook on telecommunications
A3290669	Equipment Strategy for Digital Technologies Operational Support System
A3370989	Powerlink - Telecommunications Business Strategy 2020-2027

1.4 Defined terms

Terms	Definition
DWDM	Dense Wave Division Multiplexing
EMS	Element Management System
MPLS	Multi-Protocol Label Switching
PDH	Plesiochronous Digital Hierarchy
NMS	Network Management System
NSN	Nokia Siemens Networks
OSS	Operational Support System
OTN	Operational Telephone Network
SCADA	Supervisory Control And Data Acquisition
SDH	Synchronous Digital Hierarchy
ACMA	Australian Communications and Media Authority

1.5 Roles and responsibilities

Who	What
Team Leader SS&TS	Author. Responsible for periodic review and subsequent iterations.
Manager Asset Strategies	Reviewer. Ensures alignment across Asset Strategies
Manager Telecommunication System	Reviewer. Ensures alignment across Telecommunication Design
Manager Operational Technology Services	Reviewer. Ensures alignment across Operational Technologies
Manager Field Engineering	Reviewer. Ensures alignment across Field Engineering
General Manager Asset Management	Approver. Supports the implementation of this strategy and its associated plans

1.6 Monitoring and compliance

This strategy will be monitored and reviewed periodically by the asset strategies team to ensure that it remains current and fit for purpose

1.7 Risk management

By adhering to the principles in this document the risk of supporting of obsolete and unsupported network equipment can be managed

2. General Telecommunications Strategy

As discussed in the Telecommunications Business Strategy 2020-2027 and horizon – a 10 year outlook of telecommunication, the overall strategy for the telecommunications network is the migration to a more consolidated IP capable network and reduce reliance on legacy technologies.

3. Specific Asset Strategies

3.1 DWDM

Powerlink uses the DWDM network to provide long-reach and high capacity capabilities. The network principally aggregates operational traffic from the central and northern region for transit to the datacentres and operational applications in Brisbane. The current network commissioned in 2025 is not envisioned to be expanded upon for regulated purposes

Spare capacity will be made available for Queensland Capacity Networks use.

3.2 SDH

The existing Huawei SDH network used for inter substation communications is obsolete and has minimal manufacturer support. A migration from dedicated SDH to hybrid MPLS-TP multiplexer will provide SDH like functionality and capacity sufficient for Powerlinks needs as the managed migration to IP occurs.

With the installation of the hybrid multiplexers the Huawei SDH equipment will be recovered and returned to stores to support the in service equipment until they are replaced.

3.3 PDH

The PDH network is used to provide the telecommunications connection to the secondary systems, such as protection and SCADA, via interfaces that are now considered legacy as IP connected devices become more prevalent.

The hybrid multiplexer will provide these legacy interfaces until a migration to IP based services occurs and PDH will be removed from the network. Any change to the secondary systems to facilitate a move to IP will be covered by separate projects where there is a need to do so.

Where PDH devices provide the connectivity between sites, then this equipment will be replaced by the hybrid multiplexer.

A number of released PDH cards will be recovered as spares holding whilst the migration to the hybrid platform occurs. Energy Queensland will also be consulted on their requirements for any surplus we may have.

3.4 IP/MPLS

The current IP/MPLS equipment will be replaced due to obsolescence with traffic migrated across to the hybrid platform for carriage on the MPLS-TP network. It is anticipated that telecommunications traffic over this network will increase as services are migrated away from SDH and PDH networks to IP along with emerging requirements in the secondary systems space.

3.5 Microwave

Powerlink will continue to utilise microwave technology where required to provide medium capacity links where no fibre is available. Replacement of existing links will be on an as is basis, however as the network becomes more IP enabled then the possibility of using native IP transmission over microwave will be considered.

As viable opportunities arise then it is the preference that microwave technology is removed from the network and any unused microwave sites will be sold, decommissioned or mothballed.

3.6 Powerline Carrier

Powerlink will continue to utilise powerline carrier technology where required to provide low-capacity links where no other form of telecommunications are available. In this instance only protection services will be provisioned with other services being provided by cellular/satellite technology. Replacement of existing links will be on an as is basis, however every opportunity *will* be taken advantage of to remove powerline technology from the network.

3.7 Pilot cables

There is to be no new installation of pilot wires with the exception of providing synchronisation services to generators where no other viable technology solution exists. Every opportunity is to be explored to remove all pilot cable from the network.

3.8 UHF/VHF network

The UHF/VHF network is no longer required as advances in technology in providing remote voice telecommunications has rendered the equipment and functionality obsolete. Equipment will be steadily decommissioned as opportunities arise and the associated radio licences with ACMA will be surrendered and sites will be sold, decommissioned or mothballed

4. Distribution list

Divisional Distribution	Contact details
Chief Executive	N/A
Delivery and Technical Solutions	General Manager Design Solutions
Finance and Governance	N/A
Operations and Planning	General Manager Energy and Digital Management
Field and Asset Management	General Manager Operational Engineering General Manager Asset Management
Strategy & Business Development	N/A