Powerlink 2027-32 Revenue Proposal

Guide to Network Capital Expenditure Project Packs

1 Purpose

This document is a guide to the project packs included as supporting documents to our Revenue Proposal. The guide should be read in conjunction with the project packs to understand:

- the purpose of each of the documents included in the project packs, and
- the level of detail to expect, based on the approval status of each proposed investment.

2 Overview

Powerlink's 2027-32 Revenue Proposal adopts a hybrid approach to establishing our forecast capital expenditure. This approach utilises a mix of bottom-up estimates and top-down forecasts to develop the forecast capital expenditure.

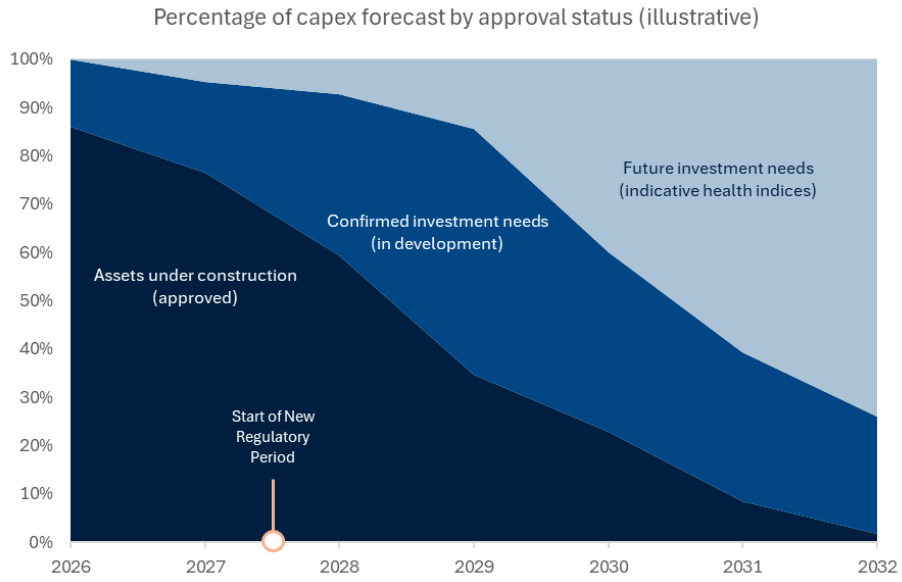
A significant portion of the forecast network capital expenditure is supported by project specific information contained across multiple project documents. These project documents have been collated into 'project packs' to demonstrate the current justification and assessment of the proposed investments.

The following sections outline the project governance cycle, the purpose of each document type in the project packs and the level of information that may be expected in these documents.

Figure 2.1 illustrates the progression and timing of investment approvals under normal business practice. The figure identifies the percentage of total capital expenditure in each year attributed to projects in differing stages, or forecasting phases, of the project governance cycle, i.e. those that are approved, those for which work has commenced toward obtaining approval, and those that have not yet been commenced.

For the purpose of the project packs, we have generally identified projects simply as either 'Approved' or 'Unapproved'. Where a project is currently undergoing a public RIT-T consultation process it may be identified as 'Stage 1 Approved'.

Figure 2.1 - Capital expenditure progress over time



Capital expenditure in 2026/27 is mostly attributable to 'Approved' projects, which is as expected from our project governance cycle. The remainder of capital expenditure in 2026/27 is on preparatory works on projects in order to obtain approval, including the management of the Regulatory Investment Test for Transmission (RIT-T) process.

Beyond the first year of the 2027-32 regulatory period, the proportion of capital expenditure attributable to 'Approved' projects falls away progressively, reflecting that capital expenditure plans for future years remain subject to detailed project development processes.

2.1 Project packs and option analysis

We have included project packs for network capital projects as supporting documents to our 2027-32 Revenue Proposal. These project packs represent proposed investments which have been specifically identified to be forecast using a bottom-up methodology.

Table 2.1 - Total Spend by Supporting Document

Supporting Document Type	% of total Network Capital Expenditure
Network project packs created	79%
Network business cases	14%
Nine (9) Network projects without project packs	3%
Trend forecast	1%
Carryover WIP	3%

When we lodge our Revenue Proposal in January 2026, we expect to provide 45 project packs which make up ~79% of the total network capital expenditure within the 2027-32 regulatory period.

Approximately ~14% of the total network capital expenditure is supported by the Operational Technology (OT) Plan (Appendix 4.07), Future Grid Operations Technology (FGOT) Plan (Appendix 4.08), Physical Security Preliminary Investment Case (Supporting Information) and Cyber Security Investment Case (Supporting Information).

A further 9 projects, accounting for ~3% of total network capex, while not provided as project packs have been forecast using bottom methodology and supporting information for these projects can be provided upon request from the AER.

The balance of our network capex forecast is made up of projects currently approved and underway with carryover (~3%) spend into the next regulatory period or where the forecast has been trended using a top-down methodology (~1%).

Detailed option analysis and economic assessment are progressively developed for investments as they progress toward approval. This means that projects in early stages of approval will have less detail than those that are fully approved or substantially progressed.

3 Contents of Project Packs

3.1 Project Pack Summary

The Project Pack Summary provides an overview of the proposed investment based on information contained in the detailed documents that follow. At the end of each summary, the list of documents included in the Project Pack for the proposed investment is provided in the order that the document appears in the Project Pack.

3.2 Condition Assessment Report

The purpose of the Condition Assessment Report (CA) is to assess the condition and expected remaining life of the assets inspected. It defines the need, and expected future timing, for asset intervention where business as usual activities (e.g. routine inspections and corrective maintenance) no longer enable the network asset to meet prescribed service levels due to the deterioration of asset condition or obsolescence of the asset.

A CA typically includes an assessment of the asset equipment based on visual inspection and available measurable data. This assessed condition is translated into a Health Index (HI) to provide a comparable tool to indicate the expected remaining life of each item of equipment based on its condition, rather than its nameplate age. A similar approach is used for each asset class of substation primary plant, substation secondary systems and transmission lines.

3.3 Planning Statement / Planning Report

The Planning Statement, or Planning Report, defines the investment need and network risk arising from non-investment in the asset. Projects that have significantly progressed toward approval will typically include a Planning Report, while projects at a more conceptual phase will include a Planning Statement.

Where an asset is identified as reaching its end-of-life, this document conceptually identifies both network and non-network options that enable the required level of prescribed transmission services to be met (regardless of the asset deployed). This document also identifies levels of unserved energy at risk, and any non-compliances that would arise with reliability obligations and/or system standards, if the asset is removed or fails in service.

3.4 Project Scope Report

The Project Scope Report (PSR) defines the high level, functional requirements of the recommended option that is required to achieve the project need and objectives derived from the Planning Statement. The PSR also defines any assumptions and special considerations affecting project scope options, e.g. current standards and compliance requirements that need to be addressed within the project.

Where the project is progressing through business as usual activities in preparation for full option assessment, as part of the RIT-T process, a PSR may also provide details of alternative options and RIT-T ‘modelled projects’ in order to effectively cost and assess all options and investment paths over an appropriate assessment timeframe.

The PSR is a formal document that is used to request an estimate for one or more options described in the document.

3.5 Concept Estimate / Project Management Plan

A Concept Estimate, or Project Management Plan, provides a financial estimate of the labour, materials, equipment and subcontracts required to achieve the project scope. Project estimates are developed using a first principles approach, where the estimate is calculated based upon the specific resources and quantities required to complete the defined scope of works.

Class 5 (-50% to +100% accuracy) estimates are developed for projects with high level scopes early in their development life. These may be presented in a Concept Estimate document or a Project Management Plan, depending upon the level of consideration applied to project staging, outage requirements and project delivery strategy.

Class 3 (-20% to +30% accuracy) estimates are developed for projects where the scope is more defined and support full financial approval. These are typically presented in a Project Management Plan, which details the project staging, outage requirements and project delivery strategy.

All cost estimates presented in Project Packs are base costs only and do not include any allowances for risk, contingency or escalation.

Further details of our cost estimating methodology are provided in Section 5.8.2 of our Revenue Proposal.

3.6 Risk Cost Summary Report

The Risk Cost Summary Report quantifies the base case and option risk cost profiles for network assets reaching end-of-life. These risk cost profiles are included as part of an overall cost-benefit analysis (CBA) to understand the economic benefit of the proposed investment.

This process provides a benchmarking and internal gate process to support Powerlink in effectively identifying prioritised investments within the portfolio of works.

The CBA was designed to demonstrate and quantify the value to be gained through specific investments.

3.7 RIT-T documents

RIT-T documents are included in the project packs where the formal RIT-T consultation process has commenced or concluded.

A Project Specification Consultation Report (PSCR) is included in the project pack where the project has recently commenced the RIT-T process. This document provides details of the identified need, credible options, technical characteristics of non-network options, and categories of market benefits addressed in the assessment. In particular, it encourages submissions from potential proponents of feasible non-network options to address the identified need.

A Project Assessment Conclusions Report (PACR) is included where the project has concluded the RIT-T process. It provides details of the identified asset need, credible options, technical characteristics of non-network options, and categories of market benefits addressed. It summarises the assessment undertaken to compare network and non-network options to address the network need and confirms the ‘preferred option’ to address network requirements at the lowest net cost to electricity customers.

For a small number of projects, where the value exceeds a materiality threshold and the RIT-T has not yet reached the final stage of the process for the PACR to be issued, a Project Assessment Draft Report (PADR) may be

included. It provides the details of the identified asset need, credible options, technical characteristics of non-network options, and categories of market benefits addressed. It summarises the assessment undertaken to compare network and non-network options to address the network need and recommends a 'preferred option' to address network requirements at the lowest net cost to electricity customers.

4 Programme of Work Summary Packs

In some cases a common investment need and preferred option applies to several projects, where the projects may be focused on a geographical area or in a particular year. In these cases the separate projects are grouped to represent a programme of work.

The Project Pack for a programme of work will typically comprise of the same documents as the standard network project packs, but only for a representative sample project within the programme of work. Documents for other projects within the programme of work will be available on request.

The main programmes of work are:

- DC Battery Replacement Programme
- DC Systems Replacement Programme
- Substation Site and Transmission Line Easement Acquisition Programme
- Geographic Line Refit Programme
- Current Transformer Replacement Programme
- Telecommunications Replacement Programme
- Capacitive Voltage Transformer Replacement Programme
- Traction Supply Infrastructure Replacement Programme

5 Listing of Project Pack

Project Packs
CP.02003 Woree-Kamerunga 132kVLine Reinvestment
CP.02170 Chinchilla Substation Replacement
CP.02370 T048 Tully - Transformer 2 Replacement
CP.02400 Alan Sherriff Secondary Systems Replacement
CP.02478 South Pine No.5 Transformer Replacement
CP.02584 Tarong Transformers Replacement
CP.02617 Kamerunga Substation Rebuild
CP.02631 Ross-Dan Gleeson 132kVTransmission Line Refit
CP.02729 Mudgeeraba 110kVSecondary System Replacement
CP.02750 Ross to Chalumbin Life Extension
CP.02751 Murarrie Secondary Systems Replacement
CP.02756 Molendinar Secondary Systems Replacement
CP.02760 Middle Ridge Secondary Systems Replacement
CP.02796 Goodna Secondary Systems Replacement
CP.02798 Middle Ridge Transformer Life Extension
CP.02800 Alligator Creek Substation Reinvestment
CP.02818 Woolooga-South Pine 275kVLine Refit
CP.02829 Strathmore SVC Secondary Systems Replacement
CP.02841 Garbutt Secondary Systems Replacement
CP.02855 Ashgrove West Secondary Systems Replacement
CP.02860 Ingham Soutth Substation Reinvestment
CP.02919 Broadsound Primary Plant Replacement

Project Packs
CP.02922 Calvale Selective Primary Plant Replacement
CP.02948 Chalumbin 275kV Substation Reinvestment
CP.03005 Tennyson Transformer 3 Replacement
CP.03094 Procurement of Spare Transformer
CP.03144 Chalumbin 132kV Substation Reinvestment
CP.03149 Newlands Transformer 1 Life Extension
CP.03196 Mudgeeraba to Terranora Refit
CP.03197 South Pine 275kV Secondary Systems Replacement
CP.03198 South Pine 110 kV Secondary System Replacement
CP.03208 Mudgeeraba 275 kV Selective Primary Plant Replacement
Telecommunication Network Consolidation and Equipment Replacement Programme
CVT Replacement Programme
Current Transformer Replacement Programme
DC Battery Replacement Programme
DC System Replacement Programme
Geographic Line Refit Programme
Traction Supply Infrastructure Replacement Programme

6 Project Packs Not Supplied

Project Packs Not Supplied
CP.02845 Townsville South Sec Systems Replacement Stage 2
CP.02859 T026 Biloela Secondary Systems Replacement
CP.03072 Woree PASS M1 replacement
CP.03119 Townsville East Sec Systems Replacement
CP.03200 West Darra (T155) Secondary System Replacement
CP.03217 T027 Moura Transformer 2 Life Extension
CP.03218 T027 Moura Transformer 1 replacement
CP.03219 H014 Middle Ridge selective primary plant replacement
CP.03220 H005 Woolooga Bay D014 Primary Plant Replacement