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POWERLINK QUEENSLAND REVENUE PROPOSAL

Supporting Document - PUBLIC

Powerlink Queensland
Asset Refurbishment - Policy

Delivering better value

Asset Refurbishment

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30/05/11	3.0	Title Changed From Refurbishment of Transmission Assets. Template and introduction section reorganised.	N/A	[redacted]	[redacted]
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1. INTRODUCTION

1.1. Purpose

This document sets out the policy adopted by Powerlink Queensland for Operational Refurbishment. The objective of this policy is to establish the overarching principles which determine Operational Refurbishment needs, plans & projects.

1.2. Scope

The requirements of this Functional Policy apply to the refurbishment of all network assets.

Internal References

2. OPERATIONAL REFURBISHMENT PLANNING

2.1. Objectives

It is Powerlink policy to maintain plant in service, functioning correctly with regard to the original design, for as long as it is economical and safe to do so. Work done to achieve this objective is done under the categories of preventive or corrective maintenance.

At times, work is required on a piece of plant or equipment forming part of an asset that is preventive in nature, but is more extensive than that normally performed as part of ongoing maintenance.

The trigger to assess whether this type of work is Operational Refurbishment occurs when the field maintenance labour commitment is estimated to exceed a defined level.

When work exceeds this labour commitment, the potential operational refurbishment need is referred to the relevant asset strategies teams for action, with identified needs progressed in line with the following conditions:

- The extent of the Operational Refurbishment need identified requires the engagement of multiple service provider groups across different geographic regions, and as such, the merging of the Operational Refurbishment need into a single project is considered to provide for economies of scale
- The work required to address the Operational Refurbishment need involves the engagement of non-field maintenance resources (e.g. external contractor, design) to support or provide work deliverables
- The nature of the work requires extensive coordination of network outage requirements with Powerlink's broader program of planned works requiring network outages.

Operational Refurbishment work will be clearly defined in terms of scope, cost, timing and implementation responsibilities. Because it has a fixed scope and timing, all refurbishment is done as an ***OR*** type project in SAP (***O***perational ***R***efurbishment).

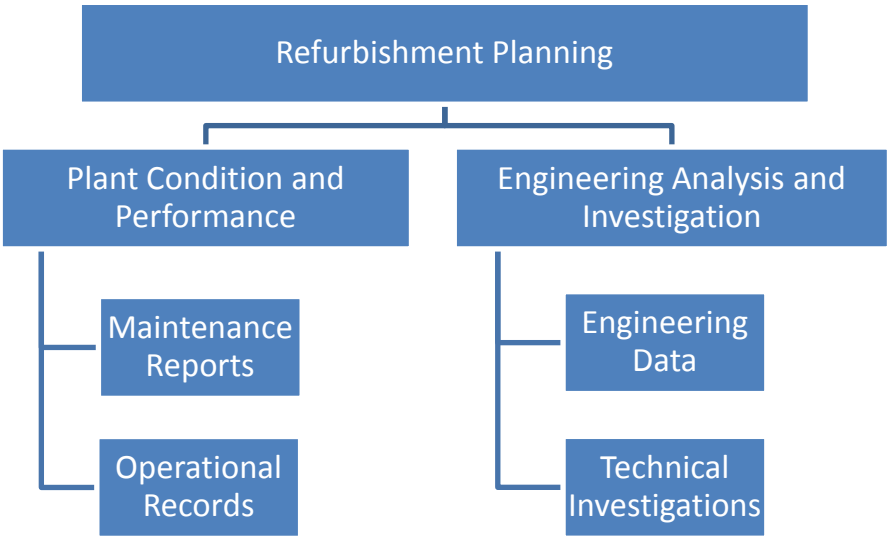
2.2. Planning Process

Operational Refurbishment planning is an ongoing and iterative process where needs are coordinated within and between plant areas. A plan to address operational refurbishment needs is prepared annually and reviewed on a monthly basis..

Powerlink's overall network planning includes coordination of major operational refurbishment requirements with the broader capital works program that is primarily driven by demand growth or asset reinvestment. Synergies between projects arise due to common design processes, work type, geographical location or timing and may result in economies of scale and/or optimised delivery.

2.3. Inputs to Refurbishment Planning

Refurbishment planning is based on a number of inputs, including analysis of maintenance records, operational performance, engineering details, component investigations and other relevant data to develop a holistic view of the condition of the asset. The model below demonstrates how these inputs contribute to the identification of refurbishment requirements.



More detailed descriptions of the matters considered in each of these areas are included below.

Preventive work which is more extensive in nature than that normally performed as part of ongoing maintenance can arise from any of these areas and in accordance with Powerlink financial practices would be carried out as Operational Refurbishment.

2.3.1. Maintenance Reports

Powerlink implements a program of preventive and corrective maintenance, from which reports are derived regarding defects or the abnormal condition of plant and equipment. In line with normal work management processes, these reports shall be documented in SAP in the form of defect notifications, work orders and measurement documents.

Each asset strategies team uses data contained within SAP, in conjunction with direct interaction with field maintenance personnel, to derive an overall evaluation of maintenance history for plant and equipment. This process gives rise to preventive activities for the assets and, where more extensive than normal preventive or corrective maintenance, will be undertaken as Operational Refurbishment.

2.3.2. Operational Records

Powerlink maintains a range of systems for monitoring the operational performance of plant and equipment. An example of this includes the Forced Outage Database (FOD) that records forced outages of the high voltage transmission network. This database is supported by a business process that seeks to establish the root cause of each event, and where this is attributed to the condition or performance of plant or equipment the corrective activities may be undertaken as Operational Refurbishment.

Data collected from other real time monitoring systems, including the Energy Management System (EMS) historical alarm records, on-line plant monitoring systems and operation wide area network (OpsWAN) are also used to interpret and evaluate plant and equipment performance. Operational Refurbishment activities may arise from this analysis.

2.3.3. Engineering Data

Engineering data provides information relating to the designed performance of the asset. This could include structural, electrical, layout and configuration design information. For some plant and equipment types, relevant engineering data will provide an assessment of material performance in the service environment, design vulnerabilities and assumptions, historical performance of similar assets and industry experience.

2.3.4. Technical Investigations

Specific issues with plant condition or performance are on occasion referred for further technical investigation. This occurs when the scope of work required to respond to the issue is unclear or requires evaluation due to a number of options being available.