



## Snowy Hydro

Renewing performance

Snowy Hydro is a Peak Electricity provider for the National Energy Market in Australia. Primarily a Financial Risk Management company, it has a completely different business model than other power generators. Snowy owns and operates the 3950 megawatt (MW) Snowy Mountains Scheme, an integrated water and hydro-electric power project located in Australia’s Southern Alps as well as two gas fired power stations in Victoria, the 300MW Valley Power and the 320MW Laverton North facilities.

### ANALYSIS

Renoir was invited to identify opportunities to increase the available MW generation hours of the hydro and gas units, take advantage of spot market pricing through the decrease of planned outage maintenance duration, improve maintenance planning & review processes and create a uniform Management Control System across the Snowy Scheme.

### PROJECT APPROACH

The project was designed as a 42 week program, led by a full time, on-site Renoir team, consisting of a Project Manager and three Consultants, supported by an 11 member full time, Snowy Task Force, which was gradually scaled back to 5, during implementation.

The project was governed by the client via Management Action Teams (MATs) and a Steering Committee, who were charged with the responsibility of ensuring that the project developed and delivered sustainable solutions.

### THE FOCUS PROCESS™

The project conducted Role observations, inventory studies, Sequence questionnaires, Work order studies, etc.

The surveys highlighted opportunities in the following areas:

- Misalignment of Maintenance process with current business structure
- Maintenance system had no process owners
- No visibility of data
- No common maintenance process utilised across the Scheme
- Regions operating in Silos with no common measurements
- Inadequate tools (Plan, Schedule, Critical Path Maps, Short Interval Control) to support and organise their workforce
- No centralised planning of work to fit within a maintenance delivery plan
- Limited understanding of the ERP that structures the Work Order Process
- No clear accountability of stock management process

### Key Results

Decrease in outage time

Integrated Management Control System to manage, control and eliminate variance

Revised Maintenance Process to drive Planning and Execution improvement

Developed KPI dashboards to manage unfavourable trends and variances

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## IMPLEMENTATION

This prompted the development and installation of the following tools and procedures to achieve the targets of the project:

- Installation of a Management Control System to enhance maintenance delivery
- Installation of Critical Path Mapping to ensure timely delivery of outages
- Installation of Work and Resource Based Schedules
- Installation of uniform scheme Key Performance Indicators
- Installation of Root Cause Analysis process to identify and eliminate variance
- Installation of Cycle Counting to ensure availability of spares and materials
- Installation of Short Interval Control tool to enhance active supervision
- Installation of enhanced Production and Maintenance Planning systems and practices to link business objectives and strategies to work execution.

During implementation the Management Control System (MCS) was installed, enforcing daily, weekly and monthly KPI reviews, with investigations and actions generated to address any exceptions. The MCS created consistent measurements in each region allowing for central control.

Solutions were developed and implemented with the collaboration of the various operational stakeholders and departments and supported during the implementation phase.

## RESULTS

- 32% average reduction of Class 1,2 & 3 Outage durations through installation of Critical Path Mapping
- Enabled the revival of Work Planner as an effective planning and scheduling tool
- Conducted Ellipse training across all regional employee levels
- Increase in Monthly Plan Attainment from 55% to 84%
- Increased Active Supervision from 2% to 13%
- Increase in Stock Accuracy from 80% to 98%
- Reliability of Calculated Work Order Hours +/- 20% increase from 16% to 72%
- 100% Work Order Use Time realisation

## THE RENOIR GROUP

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