CASE STUDY ›

CONSTRUCTION AND COMMISIONING SERVICES ON THE SNOWY HYDRO 2.0 PROJECT

PROJECT OVERVIEW

The Snowy Hydro 2.0 project involves linking two existing dams, Tantangara and Talbingo, through 27km of tunnels and building a new underground power station.

The Snowy Hydro 2.0 project will provide an additional 2,000 megawatts of dispatchable, on-demand generating capacity and approximately 350,000 megawatt hours of large-scale storage to the National Electricity Market. To provide context, this is enough energy storage to power three million homes over the course of a week.

SCOPE OF WORK

RSGx has a significant involvement with the Snowy Hydro project commencing with providing consultancy and design services for the High Voltage works for FGJV to facilitate the establishment of extensive onsite services to support tunnel excavation using three Tunnel Boring Machines.

After the design of the high Voltage network protection and earthing requirements RSGx was awarded a contract to test, commission and operate the overall High Voltage Network for the project, inclusive of managing the interface with the nation electricity grid through Transgrid.

The Scope of Services provided encompasses four main aspects:

a) Permit to Work:
- Design of work processes
- Training packages for permit of Holders, Users and Authorities
- Implementation and maintenance of a permit database

b) HV Operations
- Implementation of an operating protocol
- Development and maintenance of the routine inspection check list and register as per the Safety Management Plan
- Development of training packages for HV Operators
- High Voltage access authorities
- HV Switching Services

c) HV Commissioning:
- Inspection and Test plan and test record development
- Implementation of a Test Procedure
- Readiness assessment against a commissioning Plan
- Testing & Commissioning of HV & LV Assets
- Commissioning of SCADA (as part of HV network)

d) Engineering Design:
- Implementation of HV Operational Procedures
- High and Low Voltage protection studies
- Lighting Protection Design
- Tunnel earthing Design
- Earthing and Lightning Design

Additionally, RSGx was awarded the construction & commissioning Scope of Works associated with camp electrification, batching plants and segment factory across four project locations. This scope of works entailed:
- Cable and cable ladder installation
- Cable installation
- Lighting
- Fire system installation & commissioning
- Switchboard installation
- Termination and testing
- Energisation & commissioning

SOLUTION

The provision of quality quickly mobilised self-managed resources and supporting engineering resources and processes, facilitated the rapid progress of infrastructure for the project. Detailed reporting gave the client visibility of progress, quality, budget and planning.

ACHIEVEMENTS TO DATE

RSG initial performance across multiple scopes has led to RSG being awarded additional Subcontract works across the project. This includes the completion of two camp facilities, a segment factory, and the commissioning and energisation of fifty five high voltage sub stations to support the project. RSG expertise and processes has facilitated completion on time, on budget and without an LTI.

CLIENT
FGJV
(Future Generation Joint Venture)

SCOPE
CONSTRUCTION
COMMISSIONING
OPERATIONS

INDUSTRY
ENERGY HYDRO

LOCATION
SNOWY MOUNTAINS,
NEW SOUTH WALES

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