



CASE STUDY

CONSTRUCTION OF ELIWANA AND FLYING FISH 220/33KV SUBSTATIONS.

PROJECT OVERVIEW

Fortescue is committed to decarbonising its operations in mining, port, rail, non-process Infrastructure (NPI) and mobile fleet in the Pilbara in Western Australia. Fortescue's decarbonisation plan includes development of green power generation, which consists of 2-3 GW of renewable (wind and solar) energy generation and battery storage; the renewable power generated will be transmitted to Fortescue's electrical network via dedicated connections. (Project).

As part of the Project, the PTP Stage 4 is the development of a 220 kV single circuit overhead transmission line to transmit power between the Power Station at Solomon Mine and the Eliwana and Flying Fish Mines in the Southwestern region of the Solomon Hub.

SCOPE OF WORK

RSGx is responsible for the PTP Stage 4, Eliwana Substation and Flying Fish Substation construction, supply, install, and construction verification testing of all primary and ancillary equipment necessary to achieve Construction Verification.

The Works includes five (5) Separable Portions:

- SP1- Eliwana 220kV Switchyard- Civil and Earthworks
- SP2- Eliwana 220kV Switchyard- Construction
- SP3- Brownfields Tie In- Eliwana 33kV Distribution
- SP4- Flying Fish 220kV Switchyard- Civil and Earthworks
- SP5- Flying Fish 220kV Switchyard- Construction

RSGx is responsible for the PTP Stage 4, Eliwana Substation and Flying Fish Substation:

- Procurement of all substation structures, Earthing, Power and Control cabling.
- All Civil works (Drainage, Foundations, trench systems, palisade fencing, final bench and finished surface works).
- All Electrical and Plant Assembly works including:
 - Conduits, Earth grid, Earthing and Tray Systems.
 - Control Building, Generator, Auxiliary Transformer, and Earthing Transformer.
 - 220kV switchyard and plant assemblies.
 - Plant Interconnector, OPGW works (including HV Slack Spans from 220kV Towers).
 - 3rd Party support for Transformer and GIS switchgear OEM.
 - Power and Control Cabling installation and terminations.
- All inspection and testing requirements for each piece of equipment and subsystem to achieve Construction Verification.
- All Works to tie in the 33kV power cable from Eliwana Substation to the existing 33kV distribution line.

ACHIEVEMENTS TO DATE

Four of the separable portions have reached completion with zero safety incidents (LTI's or MTI's) over the life of the project. The RSGx team were highly commended on safety, the quality of our workmanship and QA documentation. Throughout the duration of the project, our team built strong client and third-party relationships.

CLIENT

FORTESCUE

SERVICES PROVIDED

CIVIL WORKS,
STRUCTURAL AND ELECTRICAL
POWER AND CONTROL CABLE
INSTALLATION WORKS

SCOPE

PROCUREMENT
CONSTRUCTION (CIVIL, PLANT
ASSEMBLIES AND CABLING)
PRE-COMMISSIONING AND
COMMISSIONING

INDUSTRY

INFRASTRUCTURE (ELECTRICAL)

LOCATION

PILBARA, WESTERN AUSTRALIA



RSGx
ENGINEERING SUCCESS

@info@rsgx.com

www.rsgx.com