



CASE STUDY >

CONSTRUCTION OF THE 220/66KV FMG KANYIRRI SUBSTATION AND ASSOCIATED 66KV DISTRIBUTION CABLE TO HIDDEN TIGER SUBSTATION

PROJECT OVERVIEW

The 220/66kV Kanyirri Substation and associated 66kV Distribution forms part of FMG's new renewable network and will feed FMG's Port operations in Port Hedland.

SCOPE OF WORK

Construction of the 220/66kV Kanyirri Substation and the associated 66kV distribution cable system out to Hidden Tiger Substation

Kanyirri Substation Scope included:

- ◆ 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 and 22kV RMU Installation,
 - ◆ 220kV and 66kV switchyard and plant assemblies,
 - ◆ Plant Interconnector, OPGW works (including HV Slack Span from 220kV Tower).
 - ◆ 3rd Party support for Transformer and switchgear OEM
 - ◆ Power and Control Cabling installation and terminations
 - ◆ Pre commissioning, QA and Completions for all works

66kV Kanyirri to Hidden Tiger distribution cable system scope included:

- ◆ Civil construction and rehabilitation works for a 2.5km, 5 Conduit HV Power and Coms system
- ◆ 1,350m of HDD drill shots
- ◆ Concrete 66kV Cable Jointing Pit
- ◆ 10m High Cable termination pole
- ◆ Installation of 1000mm² 66kV cable and 2,500m of Fibre Cable
- ◆ Jointing and termination of 66kV, Earth and fibre cables
- ◆ 3rd Party interface Management, the cable route ran adjacent to the FMG railway corridor to Port Hedland and crossed numerous third party assets including Alinta Power, Horizon Power, Telstra, Water Corporation, Main Roads GNH Bridge and Bypass, BHP Private Road, an FMG Slurry Line and various private FO Networks.

ACHIEVEMENTS TO DATE

All four separable portions and PC were completed on time to a tight program (7 Months on site)
Zero Safety incidents (LTI's or MTI's) over the life of the project (50 000 man hours)
RSGx commended on high quality of workmanship and QA documentation
Strong Client and 3rd party relationships

CLIENT

Pilbara Energy Company (FMG)

SERVICES PROVIDED

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

SCOPE

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

INDUSTRY

INFRASTRUCTURE (ELECTRICAL
TRANSMISSION AND DISTRIBUTION)

LOCATION

PORT HEDLAND , WEST AUSTRALIA

