

Egyptian Electricity Transmission Company Case Study

Suez Canal Electricity Transmission Crossing

Summary

Egyptian Electricity Transmission Company (EETC) suffered fibre breaks on an existing OPGW network which spanned the Suez Canal. The OPGW cable provided a crucial strategic fibre optic link between the main cities of Egypt and the Sinai peninsular, and an urgent and efficient repair was needed. AFL SkyWrap® was the best and quickest way of reinstating this important fibre link where the height of the towers and the width of the span over the canal itself made installation of other cable solutions problematic.

Challenge

This was an extremely complex project requiring careful planning and coordination. Detailed risk analysis was carried out to ensure the safety of the installation crew and minimum commercial disruption to both the customer and the region. The electricity towers over the canal itself are 220 m tall and only accessible via special lifts. The lines are situated in a military exclusion zone making access very sensitive. The busy Canal was in constant use throughout the operation and no outages were required in the electricity supply.



There were aircraft warning spheres on the line which had to be removed using a specially adapted trolley to safely support two men as they worked 200 m above the Canal. A novel fixture system was designed to load the wrapping machines 4 m out on the line ready to start spinning.

Solution

SkyWrap was a unique solution to this difficult installation project as it uses specialist installation equipment to helically wrap fibre optic cable onto the existing OPGW or other earth/phase wires of overhead power lines. Specially designed SkyWrap fibre optic cable was installed without modification to towers and with little preparation or up front expense. The installation equipment is light and portable and does not require any special access clearance. SkyWrap is ideal for installations in difficult terrains achieving up to 4 km per day.



Results

Using the unique SkyWrap installation system, AFL was able to provide EETC with a cost effective repair without the complication and major disruption of having to replace the OPGW cable itself.

