

ONSITE TAP CHANGER RETROFIT

ASSET DETAILS

Transformer: 20/33MVA 66/22kV, ONAN/OFDAF

Tap Changer: Ferranti EST6LF, OLTC

PROJECT BACKGROUND

During routine offline electrical testing, our customer identified anomalies in the unit through a dynamic current measurement test. These findings were also confirmed by dynamic resistance measurements.

Further investigation showed that the tap changer would require extensive maintenance and replacement of some parts in order to return the asset to reliable in-service condition.

The objective of the project was to find a cost effective solution that would extend the life of the asset.

PROJECT SCOPE

Given the age of the tap changer and limited supply of OEM parts, the best option was to replace the tap changer. This included the design, manufacture, supply and installation on site.

An engineering assessment was undertaken to identify and source an ABB-UZELT 380/600 (17 tap position) tap changer with the closest available terminal orientation to be retrofitted.

The on-site lead modification works (including manufacture and installation of the adapter) were carefully planned to limit exposure to the active part and to ensure that risks were identified and mitigated.

PROJECT OUTCOME

The works were completed safely within the allocated outage time which ensured minimal impact on grid supply. On-site testing conducted upon completion validated the performance of the new tap-changer. Testing also confirmed that all measurements were within operational limits.

The transformer was successfully returned to service on time. The newly installed tap changer will extend the life of the asset and reduce future risks. Spare parts for the tap changer will also be readily available for the customer to prevent any further complications.

