



Global Data Centre Customer DC System Upgrade Program

PROJECT DETAILS

Client

Global Data Centre

Consulting Engineer

Eta Projects Ltd

Value

£324,500.00

Timescale

9 months

DESCRIPTION

Eta Projects was awarded the program to replace the existing obsolete Eltek SMPS175 DC Systems to the new Emerson Netsure 211 DC Power System.

The new Emerson Netsure 211 System offered the client a more compact, efficient and powerful design as well as remote control and monitoring software.

This project was given high profile by the client as there had been major incidents reported at various customer site locations resulting in:

- Repeated emergency measures taken to maintain services due to non-replaceable failed parts.
- Loss of service following complete failure of system.
- Systems overheating and on occasions the Eltek had caught fire.

Eta Projects team had 8 months to complete the upgrade of 356 end of life Eltek SMPS175 Version 1 and Version 2 systems located at 186 customer locations across the UK.

This extensive project proved to be logistically challenging. With access to sites being customer driven there were often delays restrictions, cancellations and point-blank refusal to site, however these obstacles were handled with a dedicated and planned approach that would eventually see our target achieved on time.

Eta Projects dedicated team of specialist engineers with over 50 years of experience proved invaluable as the upgrade project was completed with 100% success with no incidents reported.

OBJECTIVES

Arrange access to site. Replace the obsolete Eltek SMPS175 DC Power Systems with the new Emerson Netsure 211 DC Power System. Transfer all the tele-communications circuits and batteries from the Eltek system to the Emerson system without any loss of service to customers. Commission systems and complete an alarm test and cabinet inventory on completion.

DESIGN

The client were in agreement that Eta Projects adopt their proven non-service affecting "Live change out" procedure method on a site by site basis throughout this project. The new Emerson DC Systems would be installed adjacent to the existing Eltek DC System (where possible). All supplies migrated without loss of service. Alternative measures were adopted depending on the configuration or restriction of the cabinet. Redundant equipment to be removed from the cabinet and stored for disposal.

DOCUMENTATION

On completion of each upgrade Eta Projects produced an approved handover document detailing all the relevant site details and up to date layout drawing of equipment housed within the client's cabinet. Eta projects also provided the client with load and voltage readings along with energy efficiency savings calculations of each cabinet upgraded from the Eltek SMPS175 DC Systems to the Emerson Netsure 211 DC Power System. Any other relevant issues not-related to the project was also highlighted and reported to the client.

Eta Projects would then update the client's Customer site database with the information contained within the handover document.

SPECIFIC DESIGN REQUIREMENTS

Prior to the commencement of the upgrade program Eta Projects was commissioned by the client to produce an evaluation report to find the most suitable power system for this and future projects. Once the system requirements were provided by the client Eta Projects worked with various suppliers to come up with a suitable design for the new DC Systems.

Eta Projects exhausted explorations on various options to achieve a single product solution to accommodate all the clients' requirements. The solution proposed was achieved using two standard products from the Emerson range of products as follows:

- 1) Netsure™ 211 Series (Integral DC Distribution)
- 2) Netsure™ 211 Series (External DC Distribution)

Eta Projects was of the opinion that the Emerson range of product offered the client the most cost effective solution. The products were also available off the shelf and modifications to alarms etc. were localised and did not require retooling.

Finally, an innovative new tool was designed by Eta Projects for transferring existing telecoms output cables from the existing DC System to the new DC System without losing power. Without a doubt this tool aided the successful outcome of this project.