



CASE STUDY

RJ POWER GROUP

The High Voltage Network Provider

Scheme	C138424 Power Supply Enhancement (PSE) Phase 3
Location	Between Stone Crossing Substation and Ebbsfleet Substation
Client	BCM Construction Ltd
Completed	November 2015
Value	£107,000



RJ Power Group, having successfully completed Phase 2 of the Power Supply Upgrade Project for their client BCM Construction Ltd, negotiated Phase 3 of the project to Install, Test and Commission new 650v High Voltage (HV) feeder supplies including all associated HV pilot cables.

The works in preparation for the new high-powered rolling stock on the North Kent Lines serving London, was awarded in January 2015, works which also formed part of a wider Network Rail initiative to renew many of the aging electrical assets serving their network.

The project name 1608B was used as a reference to the original name of the oil fed HV cable that run between stone crossing substation and Ebbsfleet sub station

RJ Power Group in conjunction with their client, provided a risk assessed solution to fully install, test and commission, the necessary HV requirements for the project.

These encompassed:

- 🌀 Sheath testing HV cables
- 🌀 Jointing HV cables
- 🌀 Jointing Pilot cables
- 🌀 Terminating Pilot cables
- 🌀 Installing Pilot Boxes
- 🌀 Terminating into Pilot Boxes
- 🌀 Pressure testing jointed HV cables
- 🌀 Testing Terminated Pilot cables
- 🌀 Terminating HV cables into switch gear
- 🌀 Earth Testing of Substations
- 🌀 Isolating and Earthing Substations
- 🌀 Purging oil filled cables
- 🌀 Locking off oil tanks
- 🌀 Cut and Capping HV cables
- 🌀 Taking switch outs of Feeders
- 🌀 Removing redundant Hot Splices
- 🌀 Pressure testing final Installations
- 🌀 Commissioning new Feeder into service
- 🌀 Collating Handback documentation for client
- 🌀 Submitting Documentation to Network Rail



The Challenges and Solutions

Access issues and cancellations plagued the project throughout, mainly as a result of freight train runnings, resulting in RJ Power Group calling on their vast resource pool to mitigate the delays caused by others, and to keep up with the challenging programme timescales.

Installation works were mainly restricted to midweek night possessions, providing a working window of no more than two hours per shift. RJ Power Group therefore, maximised the use of these short possessions by carefully planning their activities in conjunction with their client's works and also those activities of other third parties.

One party in particular, UK Power Network Services (UKPNS) - who were converting a Track Parallel (TP) hut into a new substation in the middle of the worksite, creating an additional feeder location - were pivotal to the success of the project. This provided a real opportunity for RJ Power Group to bring their solution-focused approach to the fore.

As a result, it became apparent quickly that in order to commission the works on time, RJ Power Group had to re-engineer their complete scope of works, to take into consideration this additional feeder being introduced and provide a proposal to ensure that their works were delivered in line with the project timetable of the third party - UKPNS - and to ultimately deliver and commission the works on time on behalf of their client and Network Rail (NR).

All parties (UKPNS, BCM, RJ Power Group and NR) worked closely together to discuss the likelihood of commissioning both these feeders over one weekend - a feat that had never been previously achieved. Further meetings took place with all parties and a strategy was adopted to achieve this - confidence having been gained from RJ Power's exceptional delivery on previous phases.

Taking the lead throughout the commissioning weekend, RJ Power Group successfully handed over to UKPNS both feeders, which were fully commissioned into service during a single weekend possession.

The Benefits

A strong collaborative approach to this project enabled RJ Power Group to successfully complete the project and deliver an end solution that had never been previously achieved.

A thorough understanding of the interdisciplinary nature of others and their works enabled RJ Power Group to re-assess their scope of activities for the benefit of all parties.

The ability to flex their competent resource pool, allowed RJ Power Group to meet the scope change without impacting the completion date

A flexible commercial model and a relationship forged from trust and reliability with their client allowed, RJ Power Group, to efficaciously manage the project and deliver a project with a high degree of quality - with zero defects. Fully showcasing the benefit of RJ Power Group's approach to delivery contracting, highlighting their willingness to always go the extra mile.



Why RJ Power Group

RJ Power Group are an experienced power solutions delivery provider who work collaboratively with their clients and own supply chain as a reliable and trusted partner, providing exceptional expertise and proven project delivery.

Testimonial

"I believe it is the first time two (E&P) principle contractors have worked so closely and collaboratively together to produce such a result.

This took quite a bit of planning and negotiation with both parties and the N/R IP team, but the results were that two HV feeders and a substation were commissioned over one weekend. This meant optimising the two contractors programs and careful activity planning, but resulted in one only HV outage being needed to commission both substation and feeders, minimising risk and disruption to the railway."

Well done all

Kind regards,
Tim Le Breton