



**SPE ELECTRICAL**



## **CASE STUDY 14: ROSEBERY GROUP / MAKPOWER**

### **7.5MW STOR GENERATION: HV AND LV DESIGN**

<b>Client:</b>	Rosebery/Makpower
<b>Industry:</b>	Generation
<b>Plant Type:</b>	Diesel
<b>Project:</b>	Design & Protection
<b>Contract:</b>	Lump Sum
<b>Date:</b>	2017

**“SPE was appointed to provide technical design services for the HV and LV systems of the new generation plant.”**

SPE was contracted by both the Rosebery Group and Makpower to undertake some urgent design work for a new 7.5MW generating site, forming part of the new STOR framework in Northamptonshire, UK. The project was significantly behind schedule and SPE were tasked with resolving all of the HV design issues and ensuring that the HV and LV systems were coordinated.

SPE's scope included developing a design and specification for the main HV switchboard, including the protection requirements and interlocking and inter-tripping arrangements with the LV breakers and the DNO. SPE then produced a detailed SLD of the power system defining all of the key electrical elements and interfaces of the system. SPE also carried out a series of cable sizing calculations for the site, considering the relevant site conditions, and fault levels for the site.

In addition, SPE provided ad-hoc support in liaising with the ICP and generator manufacturer to confirm the site fault levels, and generator earthing requirements.