



Project	11kV Switchgear Replacements
Client(s)	EDF Energy Networks
Location	SPN Network - Various sites
Project Start Date	January 2007
Project Completion Date	December 2007

In recent years EDF Energy Networks have made significant investments in the renewal of old redundant 11kV switchgear, replacing it with new modern switchgear which in some cases can be fully automated. HVMS's Utilities business has been heavily involved in successfully delivering this service for EDF Energy Networks, and the working relationship continues to develop and expand.

Typically the work involved in carrying out switchgear replacements can be explained using the following example site for the replacement of an Oil filled Circuit breaker at Perry Cottages substation in Surrey with a new SF6 gas circuit breaker.

In order to carry out the works at Percy Street substation, HVMS staff planned the relevant electrical outages for the day, and the logistics of all required equipment for carrying out the works. For the small number of customers affected by the planned isolations, HVMS staff issued shutdown notice cards two weeks prior to the works being carried out.

Working in conjunction with EDF Energy Networks control centre, HVMS staff firstly switched the LV network in order to maintain supplies to local customers and then carried out pre-agreed switching to isolate the switchgear at Percy Street.

Percy Street substation was isolated from the EDF Energy Network following HV isolations carried out by HVMS staff at Church Street substation and Toys R Us substations. With this stage complete, the circuit was then earthed to prove dead and the HVMS SAP (Senior Authorised Person) subsequently issued safety documents to the HVMS Technicians to enable them to work on the equipment. With these in place, the work required on the day was then reviewed and discussed with all team members and a site specific Risk Assessment completed.

HVMS successfully executed the following works at Percy Street secondary substation:

- ▶ Site excavation
- ▶ Removal of redundant switchgear
- ▶ Installation of new switchgear
- ▶ Pre-commissioning tests on switchgear and protective devices
- ▶ Preparation and installations of HV cables into the new switchgear
- ▶ Completion of HV jointing (x 2 straight joints)
- ▶ Reinstate all excavations

Upon completion of the required works, EDF Energy Networks HV Control Centre were re-contacted, safety documents were cancelled, and the network restored to normal running conditions. The EDF Energy Project Manager responsible for the 11kV Switchgear Replacement programme in Crawley, Mr George Woollard confirmed, "It is through HVMS's professionalism and commitment to safety that EDF Energy have been able to upgrade less reliable and obsolete assets such as at Percy Street with new modern assets for the current and next generation."

Commissioning and on site records were then completed by the HVMS SAP and returned to EDF Energy Networks for the updating of their systems.