

## CASE STUDY : THE LARGE RETAIL OUTLET

Year of project completion: 2016

### Input:

This installation in Leeds was part of a major client's energy saving project, worth over £1 million, which involved the installation of our units in almost every one of their stores throughout the UK.

Prior to quotation, our engineer visited each site to survey the area, and fit voltage loggers, which provided a more accurate account of the level of voltage utilised, kwh used and likely savings to be made.

We included the following in our quotation :

- 10 year warranty
- Overnight work at each store, in order not to disrupt normal business operation of the stores.
- Back-up generator hire, positioning and connection onto the stores' electrical supply during the day. This allowed the store to re-open during normal working hours, in the unlikely event that installation works were ongoing.
- Forklifts & pallet trucks for offloading, handling and positioning the Voltage Optimisation technology.
- Risk Assessment and Method Statement for each particular site.

The company stipulated an 8 hour shutdown for each installation (excluding preparatory works). Each installation was conducted from 8pm until 4am on a Sunday evening after close of the store.

Logistically, the project was a difficult one. The company have refrigeration, re-stocking of aisles and a large IT system running within their stores at all times of day/night. These departments had to be kept informed of all developments throughout the project, and all of these issues were taken into account when arranging installation.

### COST SAVINGS

<b>SIZE OF VV</b>	:	1500KVA
<b>UNIT SIZE</b>	:	(Control Panel & Optimiser in one cubicle) 960mm x 1818mm x 792mm
<b>NUMBER OF WEEKS SYSTEM IN FULL OPERATION</b>	:	52 Weeks per Annum x 7 days per week x 24 hours per day
<b>OPTIMISATION LEVEL</b>	:	8%
<b>LEVEL OF SAVINGS</b>	:	12%
<b>ANNUAL ELECTRICITY COSTS (WITHOUT VV INSTALLED)</b>	:	£393,900.81 (10.63p/kwh)
<b>ANNUAL ELECTRICITY COSTS (WITH VV)</b>	:	£346,519.92
<b>ANNUAL TOTAL SAVINGS (12%)</b>	:	<b>£47,380.89</b>

### CO2 SAVINGS

<b>TOTAL KWH USED PER ANNUM</b>	:	<b>3,705,590</b>
<b>TOTAL KWH SAVINGS PER ANNUM</b>	:	<b>4,457,600</b>
<b>TOTAL CO2 SAVINGS PER ANNUM</b>	:	<b>4,457,600KWH x 0.43* = 1,916,768KG</b>

\*using calculation taken from National Energy Foundation ([www.nef.org](http://www.nef.org))