



CASE STUDY

Abacus Lighting Ltd, Sutton-in-Ashfield, Nottinghamshire

Abacus Lighting began trading in 1958, an era when manufacturing was the backbone of the British economy and a good salary for a senior engineer was £7 a week. Modernisation of the economy and prosperity was at the fore for UK businesses in the 1950s, whilst energy saving was left off the agenda. Decades later, the world has moved forwards with energy, cost savings and security of supply very much at the core of company focuses.

Abacus made the decision in November 2015 to install a 440kVA powerPerfector unit at their headquarters and manufacturing base in Sutton-in-Ashfield, Nottinghamshire. Following the installation, the site saw a drop in consumption of around 9%. Abacus were so happy with the product and the results, they agreed to be a trial site for the new powerPerfector iQ in June 2016.

Extremely high and erratic voltages on site meant that the lighting manufacturer was not only consuming much more energy than it needed, but the excessive over-voltage was also causing issues with plant and equipment failing earlier than it would at an optimum 220V.

The powerPerfector iQ installation upgraded the existing fixed unit into a dynamic unit with many new features in addition to the added benefits of Responsive Power Optimisation.

The retro-fit installation was completed in under two hours. Once commissioned, the technology eliminated all voltage fluctuations by protecting the site against harmful voltage dips and swells by delivering a constant output voltage of 220V, irrespective of the site's conditions. With the powerPerfector iQ in place, the site now benefits from the fastest, most accurate and precise control technology on the market.

The active three-phase balancing feature resulted in improvements to the operational efficiency of equipment and its life span, as the voltages were being delivered within a 0.5V tolerance across each phase.

Improvements in power factor were also evident following the installation of the powerPerfector iQ, and the additional benefits that the technology delivered have helped to ensure a payback in under 3 years. The site saw an additional 3.8% kWh savings which represented a 40% improvement since the original install.

"We are delighted with the increased energy security that the new powerPerfector iQ brings as well as the increased financial and carbon savings we are seeing following the installation of this exciting new technology. Not only are we seeing an excellent return on our investment, but the site is also future-proofed which is a must for any site in 2017 given the challenges that the next few years present in the energy market!"

Camilla Wigmore
Operations Director
Abacus Lighting Ltd

INFORMATION

Unit	powerPerfector iQ
Unit size	440 kVA
Install date	Jun 2016
Annual kWh saving (kWh)*	42,388
Annual cost saving (£)*	5,510

* Additional savings

