CASE STUDY

Sheffield Hallam University

VOLTAGE OPTIMISATION IN UNIVERSITIES

Introduction

Sheffield Hallam University has always strived to reduce its impact to the environment through a variety of projects, both in environmental as well as energy efficiency.

One of the main areas the University targeted was the Student Union, for the electricity consumption as well as to reduce the high level light tube failures.

EMSc (UK) Ltd carried out a full site survey and recommended their unique Powerstar voltage optimisation unit to help improve the University’s energy efficiency and increase the life expectancy of their lights.

The Challenge

Having identified that the Student Union voltage was high, and that the power quality received by the building was poor, it was left to the Powerstar team to design a system which would not only reduce the University’s energy consumption but also significantly improve their power quality.

The Powerstar unit designed and manufactured for the Student Union, required to remove high levels of harmonics (electrical noise) from the supply, and its unique design, provided both the energy savings required as well as the minimisation of harmonics, thus improving the power quality at the building.

The Solution

The installation of Powerstar at Sheffield Hallam University was completed in March 2008 with minimal disruption to business.

Just the reduction in the maintenance costs at the building paid for the system in less than 24 months. With the energy savings, the University’s payback is just over a year.

Savings & Benefits

Key Figures

Savings of kWh consumption: 16.0%
Reduction in kWh maximum demand: 19%
Reduction in failure of light tubes: 75%

Benefits

The failure in light tubes was monitored 18 months before and 18 months after the installation of the Powerstar system and has saw a considerable reduction in direct carbon emissions.
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Customer Quotation

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We are absolutely delighted with the Powerstar system which has reduced our direct carbon emissions by 16%.

In addition, the significant improvement in the life expectancy of our electrical equipment due to Powerstar has shown that the overall carbon savings from this project are considerably higher than originally anticipated.

I have no hesitation to recommend Powerstar to others.

Stephen Ward, Senior Electrical and Mechanical Engineer, Sheffield Hallam University

VOLTAGE OPTIMISATION

HOW IT WORKS

NORMAL ELECTRICITY CONSUMPTION

Incoming voltage from the National Power Grid → Power supplied (average 242 volts) → Higher voltage results in equipment being overpowered and thus shortens lifespan → Excessive voltage results in a greater kWh / power demand, increasing your electricity bill

POWERSTAR

CONTROLLED ELECTRICITY CONSUMPTION

Incoming voltage reduced to operating requirement of 220 volts and power quality improved → Power supplied at 220 volts → Prolonged lifespan of equipment and reduced maintenance costs → Reduced electricity bills

Other Case Studies

There are a range of case studies and client testimonials available on our website, please visit www.powerstar.com for further information.

Further Information

Please contact the Powerstar Marketing department on 0114 2576 200 or email marketing@powerstar.com

www.powerstar.com