

Schneider Electric in tune with Royal Northern College of Music

Schneider Electric helps college make energy savings



PROJECT AT A GLANCE

Project Type
Buildings

Location
Manchester

Number of buildings:
One

Applications

Schneider Electric completed a full energy audit and implemented recommendations to reduce their energy bill by 25%.

CUSTOMER BENEFITS

- College's energy bill cut by 25 per cent, equating to a saving of 110 tonnes of carbon per year
- Self-financing package to free up money to re-invest into enhanced student services
- Improved understanding and control of building for the estates team.
- Reduction in power surges, protecting and prolonging the life of I.T equipment



Global energy management specialist, Schneider Electric has recently undertaken a pioneering project with the Royal Northern College of Music (RNCM) in Manchester.

Completed in June 2012, the project aims to improve the college's overall energy performance, while making significant financial savings. Over the course of the five year finance deal, the college expects to achieve £150,000 of energy savings, once the initial project costs have been taken into consideration. As the project is self-financing, the money saved can then be re-invested back into the College - leading to an improved overall student experience.

Over ten years, Schneider Electric has calculated that the recommended changes will provide £670,000 of savings, as well as a reduction in energy costs of £54,565 per annum – a figure that equates to 25 per cent of the buildings energy bill, or a saving of 110 tonnes of carbon per year.

The building was originally opened in 1973 and contains a range of different facilities which are available to students for up to 18 hours a day. These include concert halls, lecture theatres, practice rooms and a restaurant and dining area, all spread across four floors.

[Building application]

“With are extremely impressed with the anticipated savings of 110 tonnes of carbon per annum and the associated energy and cost savings this will deliver. Working closely with the Schneider Electric team helped us to devise a plan that enabled us to meet our targets, while working within our budget.”

Dean Griffiths, Estates Services Manager
for the Royal Northern College of Music

The college called on Schneider Electric to complete a full energy audit of the building. Based on the findings, the company then made several recommendations as to how improvements could be made to increase energy efficiencies and in turn lower the building's carbon footprint and energy bills.

Challenges to overcome...

Schneider Electric found several issues within the building that would need to be addressed. Due to the building being manned for 24 hours a day, seven days a week, lights were often left on permanently, even when rooms were not occupied. There was also an issue with fans within air handling units (AHUs) in many of the conference rooms being left on manual settings, rather than being set to automatic. Power surges were also a common problem and were causing damage to IT and other equipment.

A further concern was storing of the instruments, as the building is home to a range of musical instruments which must be stored within a very consistent humidity and temperature range to protect their tunings. This meant that any system which was implemented would have to be kept at precise settings.

Adding to these contributing factors, there was also an issue with budget constraints, meaning that some of the recommended work would have to be carried out in house at the college.

In order to overcome these issues, the Royal Northern College of Music would need several solutions implementing, as well as the financial backing to support them. Following a successful tender, a five year financing package was arranged by Schneider Electric, which incorporated all of the necessary costs of the project, including third party equipment.

The solution...

The existing Sigma Building Management System (BMS) was reprogrammed in order to improve timings and set points in the teaching spaces and auditoriums as well as variable speed drives being added to the Air Handling Units (AHUs) and fans. To help reduce energy consumption further, occupancy sensors were fitted throughout the building in order to control the heating and cooling functions. Lux motion sensors were also added to the lighting, to reduce wasted electricity and ensure they are only used when needed.

The Schneider Electric team recommended monitoring the electricity, water and gas supplies, with the aim of improving the estate director's understanding of high energy consumption areas on the site. Schneider Electric advised that an on-going energy optimisation maintenance programme be implemented, as well as standard servicing needs to further improve and maintain on-site energy performance.

In addition to the financial savings, Schneider Electric introduced voltage optimisation - reducing and harmonising the voltage of the electricity that feeds into the College. This was implemented in order to reduce power surges, thus protecting sensitive electronic equipment and IT software.

Steve Harris, national sales manager for Schneider Electric, comments: “Prestigious projects such as this are vital in demonstrating how working with an energy management specialist such as Schneider Electric can benefit any business through significant savings. In this case, the money saved can be re-invested directly back into the college and benefit the students now and in the future.

[Building application]

“On top of the extensive financial benefits the project will give to the college, we have also provided training for the in-house engineers who work on site, meaning that they can make adjustments and changes to programming if needed. The changes that were suggested will also offer the engineers more insight and understanding into how the building is functioning, highlighting where further savings can be made.”

Dean Griffiths, estates services manager for the Royal Northern College of Music, comments: “We are extremely impressed with the anticipated savings of 110 tonnes of carbon per annum and the associated energy and cost savings this will deliver. Working closely with the Schneider Electric team helped us to devise a plan that enabled us to meet our targets, while working within our budget. The finance package set out

by Schneider Electric was particularly attractive to us as it meant that they would be managing the risk in terms of capital outlay.

“We are finding that more and more students feel a social responsibility to reduce their carbon footprint, which in turn led us to look at our own energy efficiencies. By implementing these changes we hope to make the College a more environmentally friendly place for our students and help to engage them in our energy saving measures. We chose to undertake a project like this as it will enable us to reinvest the savings back into the College, making it the best learning environment possible for our students, while lowering the building’s emissions.”

For further information about Schneider Electric please visit www.schneider-electric.com/uk or call 0870 608 8 608