



Energy Savings Opportunity Scheme (ESOS) with St. John's College

INDUSTRY

Institutional -
Education

LOCATION

UK

CHALLENGE

In 2014, St. John's College had to comply with the Energy Savings Opportunity Scheme (ESOS) which is a mandatory energy evaluation for organisations in the UK that employ 250 people or more and/or have an annual turnover of €50 million or more and an annual balance sheet of €43 million or more. The ESOS is a response by the UK government in compliance with the EU Energy Efficiency Directive.

OVERVIEW

Unlike many participants, St. John's College saw it as an excellent opportunity to drive the EU's Energy Efficiency Directive forward to reduce carbon emissions by saving energy. The maintenance team at St. John's College appointed Kinect Energy Group ("Kinect") to assist and worked closely with them to develop a prudent energy management strategy.



'The partnership between Kinect Energy Group and our team was excellent. Energy audits identified a total of 95 opportunities to save energy, 15 of which underwent full life cycle cost analysis, which predicted that an outlay of £202,900 would deliver an annual saving of £74,374 with a net present value of £417,727 to the College.'

Steve Beeby
Superintendent of Buildings, St. John's College

SOLUTION

Kinect completed on-site energy audits and identified a total of 95 opportunities to save energy. One opportunity, an entry card system, had already been implemented at one of the College premises and was successful. Other opportunities that presented valuable ways to save energy and costs included the implementation of controls to prevent unoccupied rooms from being heated in other premises and the installation of smart meters and subsequent analysis of consumption data from those meters.
(continued over)



SOLUTION (CONT)

Additionally, the energy audit identified specific equipment that was operating inefficiently. For example, with the help of thermal imaging, it was clear that one particular TV screen consumed a significant amount of energy when it was left in standby and consequently had a temperature in excess of 38 degC.

The ESOS compliance exercise demonstrated that there were significant benefits to be achieved if we stepped up our existing energy reduction work. Projects were prioritised to deliver the greatest cost savings that in turn reduced the college's dependence on electricity and gas and also reduced their environmental footprint.

Following the ESOS energy audits, the college asked for further studies to be undertaken by Kinect and, in February, a thermal imaging exercise was carried out. This study concentrated on student accommodations around Cambridge City Centre and the college campus. Opportunities were identified to improve building insulation and install secondary double glazing during refits.

The study also identified an opportunity to meter and charge students for energy use instead of charging a flat rate as part of the rent. This measure would encourage reductions instead of the opposite. The thermal study also highlighted significant heat losses around the main campus buildings that may require further investigation, improved insulation and metering.



SUMMARY

Kinect Energy Group collaborated with St John's College to fully embrace the spirit of the EU's Energy Efficiency Directive and provide a strategic approach to reducing the college's energy consumption and costs by metering, monitoring, and targeting.