



Top five energy saving initiatives



Could your business save energy and money by making these simple changes? There are many ways a business can save energy and cut running costs – here, Evotech’s Senior Consulting Engineer, Richard Watts provides his top five energy saving initiatives:

Switch to energy saving LED lighting

In commercial buildings, lighting accounts for around 30% of total energy usage. Savings of up to 80% can be made by deploying efficient LED lamp technologies. Maintenance costs are also reduced as the products are usually guaranteed maintenance free for up to 10 years by some manufacturers.

Building performance optimisation



The three basic functions of a Building Energy Management System (BEMS) are improving plant control, monitoring energy usage and optimising plant operating times. Traditional BEMS, however, are commonly poorly configured, use data from aging uncalibrated sensors, and don’t take advantage of real-time or forecast weather data. Savings of up to 30% can be achieved by installing an effective building performance optimisation system.

Supply voltage optimisation



Most modern equipment is designed to operate at a voltage of 400/230V, however, the UK electricity supply averages over 420/240V, or higher. Optimising supply voltage to 225V or 220V can save anything from 5-15% in electricity consumption. Where voltage optimisation is not feasible, low and no cost improvements can be achieved by tapping down transformers or replacing old transformers where the electricity supply enters a building.

High efficiency motors and variable speed drives



Electric motors, which tend to be the largest single consumer of electrical energy, can be found everywhere - across industry and commerce; in fans, conveyor belts, - pumps, lifts and air conditioning, to list just a few examples. The energy cost to run a motor for two months can be greater than the initial purchase price. Modern motors, designed to mandatory motor efficiency standards IE2, are substantially more efficient; generally paying back their capital expenditure within the first year. Variable speed drives (VSDs) optimise the voltage and frequency supply to the motor matching speed to the actual load demand, further reducing the energy consumed.

Conduct an energy audit



Evaluating the performance of your building is the most comprehensive method of assessing how the building actually functions; not just today, but also in the years ahead. By undertaking this type of audit, you can identify the measures that will re-balance and maximise your building’s overall performance, resulting in reduced energy consumption, associated running costs and carbon emissions.

I hope you find this information useful - should you wish to discuss the guidance in greater detail or have any specific operational concerns relevant to your own buildings, please do not hesitate to contact me.



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