Case Study

powersave
Reducing energy worldwide

PowerSave™ delivers energy savings of 12.5% to the Ministry of Defence

The ESS saves an estimated £4,300 per year at RAF Dishforth.

> "The ESS from Claude Lyons is the ideal product for this type of application, as we come under increasing pressure to reduce CO_2 emissions."

Steve Young, Operations Director, Technical Combined Solutions

Background

As part of an initiative to achieve energy and cost savings, the Ministry of Defence launched a pilot scheme to assess the benefits of voltage optimisation technology.

The MoD selected RAF Dishforth in North Yorkshire to trial the equipment, as it represented a typical but challenging site.

The PowerSave™ ESS was installed at the officer's mess, which has a high volume of appliances and a costly lighting system.

How it works

The PowerSave™ ESS is an innovative voltage control technology that maintains a regulated electricity output where mains supply quality fluctuates.

Most electrical equipment is designed to accept a wide range of input voltages, but if the actual supply voltage is higher than the minimum requirement, the equipment will often consume excess power – for example, a 230V linear appliance operating at 240V will consume approximately 9% more energy than necessary.

The PowerSave™ ESS reduces the mains input voltage, balances the phase voltage and regulates the output so that equipment doesn't consume more power than necessary.

Added value

By reducing supply voltages to a controlled, minimum level, the ESS allows equipment to operate at optimum efficiency. This results in lower energy bills, longer-lasting equipment and reduced carbon footprint.

> A product that can be used to regulate the voltage delivered to a building ensures that a significantly reduced level of energy is used – and that tangible cost savings are therefore made.

Steve Young, Operations Director, Technical Combined Solutions

Why PowerSave™

A 200 amp, three phase Energy Saving Regulator (ESS) was installed at RAF Dishforth because it offered maximum energy savings.

The MoD turned to PowerSave™ through strategic partner Technical Combined Solutions (TCS). A Claude Lyons Site Survey revealed that, although a 400 amp infrastructure was in place, the RAF Dishforth site was running well below design capacity – only achieving one-third of the limit even at peak times of electricity demand.

Because of its ability to regulate voltage and balance phases, the ESS provided the most effective solution, ensuring electrical equipment operated at maximum efficiency at all times.

Outcome

The ESS achieved an average voltage reduction of approximately 8.5% at RAF Dishforth, leading to average power savings of 12.5%.

Taking into account the array of costs associated with the site's energy consumption – including the extensive labour and scaffolding required to replace lighting as well as utility bills themselves – the ESS has saved an estimated £4,300 per annum. This translates to a return on investment in just over two years.

Claude Lyons

PowerSave™ is an innovative technology that helps organisations make some of the biggest financial savings possible on their energy bills by reducing and regulating the mains voltage used to power electrical equipment. PowerSave™ products are proven, highly efficient and deliver a return on investment with minimal ongoing maintenance requirements.

PowerSave™ provides two voltage control product families: the Energy Saving Transformer (EST) and Energy Saving Regulator (ESS). The EST, ideal for sites with a reasonably stable voltage supply, reduces voltage by between 3% and 12%. The ESS provides a solution where mains supply fluctuates, maintaining a regulated output even during power dips, and delivering energy savings of up to 25%.

PowerSave™ is a division of UK-based Claude Lyons, the longest established company specialising in voltage control technologies. Backed by over 75 years of experience in the field of high quality power control solutions, the technology is very much of its time as organisations look for new ways to save money and demonstrate their commitment to the environment.

For further information please email **contact@claudelyons.co.uk**
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