

Radisson resort achieves energy savings of 15% with **PowerSave™**

“ We at the hotel are very pleased with the installation of the solution, and the predicted savings are what we are looking for. ”

George Graham, General Manager, Radisson Roe Park Resort



The ESS reduced power consumption at the Radisson Roe Park Resort from 219kW to 185kW.

### ▶ Background

Overlooking Lough Foyle in County Londonderry, the Radisson Roe Park Resort is a well-established four star hotel featuring 118 bedrooms, conference facilities, two restaurants, a spa and an eighteen hole golf course.

The hotel embarked on an initiative to reduce costs, and PowerSave™ strategic partner Hughes Energy Systems recommended the PowerSave™ ESS energy saving regulator as a means of reducing electricity consumption. The regulator technology adjusts the electrical voltage throughout the hotel to reduce excess consumption in lighting, pumps, fans, refrigeration and air conditioning equipment.

In addition to reducing electricity usage and costs, Hughes Energy Systems also recommended voltage optimisation as a means of reducing the resort's environmental impact, as each kilowatt hour of electricity is equivalent to 0.43kg of carbon dioxide.

### ▶ 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.

“ Staff at the hotel were very helpful and facilitated the smooth installation. I am positive they will see great savings as a result. ”

Dr. David Hughes, Director, Hughes Energy Systems

### ▶ Why PowerSave™

Hughes Energy Systems recommended a three phase ESS for the Radisson resort because it provided true, dynamic voltage optimisation.

A survey of the Radisson site revealed that supply voltage varied across the site, fluctuated over the course of the day and was different on each phase of the electricity supply. The ESS-A-3-400 unit – with its ability to regulate voltage and balance phases – provided the most effective solution, ensuring electrical equipment operated at maximum efficiency at all times.

### ▶ Outcome

The ESS reduced the varying incoming line voltages at the Radisson site from between 233 and 244 volts to 215 volts at all times and on all phases. Power consumption was therefore reduced from 219 kW at the higher voltage to 185 kW at the reduced voltage, translating to average power savings of 15.7%.

A smart meter was also installed as part of the solution, allowing the voltage optimisation system to be monitored remotely. This gave hotel personnel greater control over both electricity consumption and carbon emissions through their existing network, providing up-to-the-minute information on operations without needing direct access to the equipment.

### ▶ 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](mailto:contact@claudelyons.co.uk)  
or visit [www.powersavetechnology.co.uk](http://www.powersavetechnology.co.uk)

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