

Coming of age

Technological developments are delivering greater electricity savings, clean and regulated output, compatibility with the smart grid and with the confidence to offer a guaranteed return on investment, writes Tony Longstaff

Voltage management technologies have developed since “launching” in the UK some 10 years ago. Though these same basic step-down transformer style voltage optimisation systems are still being sold, the industry is coming of age.

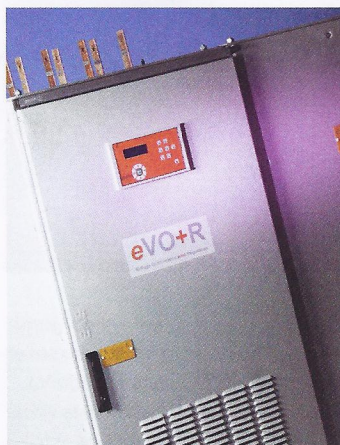
Though many energy managers, electrical engineers and companies rightly rejected the early basic systems, and viewed the whole industry with a high degree of scepticism, these new systems offer true voltage management with the over voltage being optimised and regulated to deliver a clean, stable voltage supply for mission-critical applications.

How it works

UK mains voltage is on average 242V whereas most electrical equipment is designed to operate most effectively at 220V. Voltage management works by reducing your incoming mains voltage to lower levels resulting in lower electricity bills, a reduced carbon footprint and saving you lots of money.

Old technology voltage optimisation systems are based on simple step-down transformers that reduce this mains voltage by a fixed percentage, usually 4% or 6%. Though offering some electricity savings, these old fixed ratio transformer voltage optimisation systems do not maximise the savings possible or resolve the problems caused by fluctuating voltages – which can damage sensitive electrical equipment.

The UK's National Grid, already under extreme pressure to deliver stable voltages, finds itself in a climate where increasing demand and the impact of more renewables coming on line is resulting in more supply fluctuations, not less, and



Free site survey

To find out what electricity savings are possible and how the eVO+R Voltage Optimisation plus Regulation systems can deliver improvements to your incoming mains supply, call the Energy team at e-efficient Energy Systems today on 01909 569016 or visit its new website at www.e-efficientenergy.co.uk and arrange a free site survey.

overall a further worsening of power quality issues.

e-efficient Energy's eVO+R Voltage Optimisation plus Regulation equipment takes these fluctuating incoming voltages and stabilises them to give a clean stable voltage, which is usually set at 220V – the optimal voltage for most equipment.

So you not only maximise your electricity savings but take control of your incoming supply, protecting yourself from the real threats expected from the UK's deteriorating mains supply.

The eVO+R system delivers many benefits over standard voltage optimisation systems including up to 30% higher savings than basic step down voltage optimisation systems. It offers:

- true voltage management –

typically down to 220V;

- voltage that is intelligently optimised and regulated – not just reduced by a fixed percentage;
- maximum savings possible and delivers a clean regulated voltage;
- protection against worsening supply problems; and
- a guaranteed return on Investment.

This coming of age is recognised by the Carbon Trust, which advocates the use of voltage management as a proven route to drive down energy usage and carbon footprints. Their document 'Voltage Management Guide' CTG045 describes in some detail how it works, under what circumstances electricity savings can be achieved and provides a clear methodology on how to evaluate how voltage management can help you.

e-efficient Energy has adopted this Carbon Trust methodology to ensure its site surveys and recommendations are true reflections of the potential that voltage management technology can offer in helping you reduce electricity usage and costs.

Will it help me?

The simple answer is yes, e-efficient Energy's eVO+R Voltage Optimisation plus Regulation solution is delivering proven savings and clean regulated voltages across a wide range of mission critical applications including hospitals, fire and rescue control centres, the Ministry of Justice as well as other public sector applications and cinemas and retail.

However, the potential to save with voltage management is site specific.

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