

OPTIMISING POWER TO
SAVE MONEY AND REDUCE
YOUR CARBON FOOTPRINT.
GUARANTEED.


powerstar
100% British Engineered. 100% Guaranteed Results.

MARKET LEADERS IN VOLTAGE OPTIMISATION

INNOVATOR 10



YORKSHIRE POST



MARKET LEADERS IN VOLTAGE OPTIMISATION

THE UK MANUFACTURED, ENGINEERING SOLUTION, WITH **GUARANTEED** SAVINGS.

ABOUT POWERSTAR

Powerstar is a unique voltage optimisation system with a patented design that actively reduces a considerable portion of your electrical energy consumption. It has been proven deliver average savings of 12-15% of consumed electricity. Powerstar reduces your carbon footprint and its users can qualify for carbon credits.

The Powerstar system is a worldwide market leader in voltage optimisation. It is manufactured in the UK to the highest efficiency, holding the acclaimed Made in Sheffield accreditation.

Powerstar is not an off-the-shelf product, it represents an engineering solution with a fully supportive approach from the outset to ensure the best solution is identified for your site.



Powerstar also offer the next generation electronic Powerstar MAX, a dynamic voltage optimisation system that automatically adjusts voltage to the optimum level. The Powerstar MAX is ideal for sites with fluctuating voltage of more than 10v.

Contact for info Tel +44 (0)1709 836200

Email: powerstar@ems-uk.org Web: www.powerstarmax.co.uk

THE BENEFITS OF POWERSTAR

The Powerstar system is the only voltage optimisation unit in the world to be granted a patent. It has been proven in independent tests to be the most effective system on the market.

Benefits include:

- **Savings of up to 26.1% on energy consumption and associated CO₂ emissions**
- Reduces maximum load demand (kVA) and in turn reduces electricity bills
- Reduces carbon emissions
- **Significantly reduces harmonics**
- Improves power factor by up to 20%
- Helps protect against damaging transients (power spikes) of up to 25,000V
- **Comes with up to 15 years warranty (10 with MAX) and 50 year life span**
- Lowers the operating temperatures of motors
- Increases the life expectancy of equipment and reduces maintenance costs
- Provides voltage phase balancing
- **No moving parts therefore zero maintenance**



More than 3,500 powerstar units have been installed in the UK.



Powerstar units are manufactured bespoke to site



Powerstar uses a unique triple-wound design

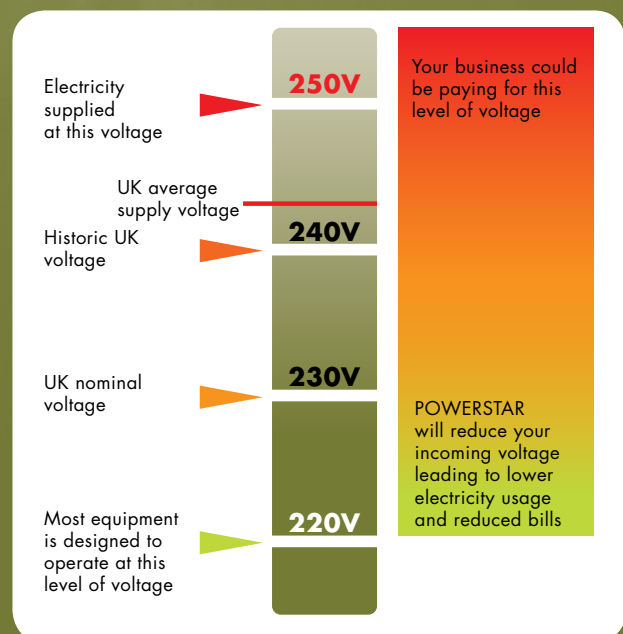
WHY USE MORE THAN YOU NEED TO?

Most electrical equipment manufactured for Europe and the UK is rated at 220V and may indeed operate at an even lower voltage. One of the reasons Powerstar is so effective is that the average voltage supplied from the National Grid is 242V (although it can be as high as 253V), whereas the nominal voltage is 230V. So, in most cases, you are being supplied more voltage than you need – and you're paying for it, whether you want it or not.

Powerstar optimises the voltage by bringing it in line with the actual needs of the equipment on site – that's why we always carry out a full site survey first to determine the exact electrical loading characteristics.

In our experience, for a 5% reduction in voltage we expect energy savings of at least 10%.

There is nothing to be gained by operating equipment at a voltage higher than it was designed for; quite the contrary as over-voltage will significantly reduce the life expectancy of most equipment. Powerstar will therefore also reduce maintenance costs.



JOIN THOUSANDS OF POWERSTAR INSTALLATIONS IN THE UK AND SAVE MONEY. **GUARANTEED.**

COMPANY PROFILE

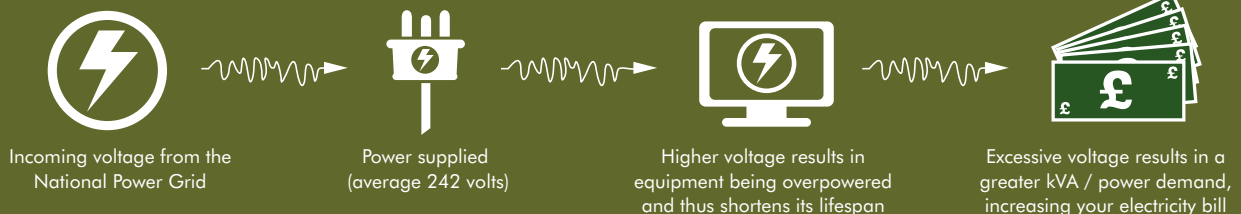
- **Market leaders in voltage optimisation.**
- At the forefront of technological advances in energy management.
- Engineering company formed in 2001.
- More than 150 years combined experience in design and manufacturing.
- **We export Powerstar overseas to 15 countries, including Australia, South Africa and United Arab Emirates. This is supported by our offices in the UK and Cyprus.**
- Project-led approach fully supported by our team of professional engineers.
- We source Powerstar components locally.
- Powerstar systems are designed, engineered and built in the UK under BS171 IEC60076.
- Powerstar is manufactured in line with ISO9001 therefore all components are traceable.
- Powerstar sizes range from 5kVA to 3,000kVA.
- Winners of the 2011 Yorkshire Post Innovation in Business Award, the 2010 Yorkshire Forward Innovator award, the 2006 Care4Air award and the 2006 & 2004 Smart award for innovation.



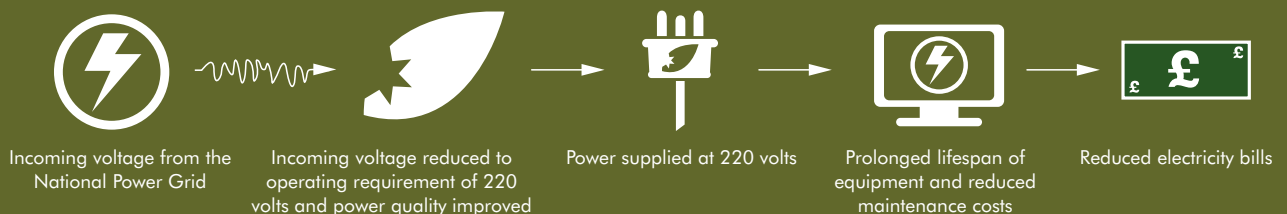
Dr Alex Mardapittas BEng, PhD, CEng, MIET, MEI
Managing Director and Powerstar Designer.

Alex studied at Kings College London and then at Brunel University. On completing his research fellowship for Manufacturing Metrology in 1993, he went on to work in professional computer software training and development. As an experienced Chartered Engineer, with a research doctorate, he possesses an extensive knowledge of software programming and innovative engineering design, which has allowed him to provide award-winning solutions to the marketplace.

NORMAL ELECTRICITY CONSUMPTION



POWERSTAR CONTROLLED ELECTRICITY CONSUMPTION



CPD TRAINING SEMINARS FROM POWERSTAR



Due to our extensive engineering background and experience in the design and manufacture of voltage optimisation systems, Powerstar experts are certified to provide CPD (Continuous Professional Development) presentations through seminars or organised training sessions.

If you would like to arrange for a voltage optimisation expert to visit your offices to deliver a CPD presentation, please contact us by calling 01709 836 200 or via powerstar@ems-uk.org.

All attendees will be awarded with certification and self-assessment records for use as evidence for professional association records.

HERE'S WHAT OUR CLIENTS SAY:



Mark Orpin, Head of Energy Management, ASDA Supermarkets

"Powerstar voltage optimisation has been a major part of our comprehensive energy efficiency programme. It is perhaps the simplest and most effective way to instantly save energy and therefore we would highly recommend Powerstar systems."



Stephen Ward, Senior Electrical and Mechanical Engineer, Sheffield Hallam University

"We are absolutely delighted with the Powerstar system which has reduced our direct electricity and carbon emissions by 16%. I have no hesitation to recommend Powerstar to others."



Andy Barrett, National Facilities Manager, Punch Taverns

"We are very pleased to announce a 24% saving at our Pride of Lincoln public house site after the installation of the Powerstar voltage optimisation system, which greatly surpassed the initial guaranteed savings of 14%. Powerstar has been the single most effective project in saving energy that Punch Taverns have invested in and we will be installing Powerstar in at least 80 of our properties this year alone."



YES, WE 100% **GUARANTEE** HOW MUCH YOU WILL SAVE.

POWERSTAR CASE STUDIES

Guoman Hotels Group Ltd – Thistle Hyde Park Hotel



Savings

Savings in the total electricity consumption have reached 26.1% at the Thistle Hyde Park Hotel. Throughout the other installations savings have never been less than 11.5%. Thistle Hyde Park are benefiting from £10,891 annual electricity savings.

Customer Quotation

"From the outset, the Powerstar team was pro-active, commercially aware and able to demonstrate a high level of competence in both analysing our technical and subsequent installation requirements within a hotel environment.



They promised technical support, professionalism and minimum fuss and that was precisely what they delivered".

*David Hannah, Head of Property,
Guoman Hotels Group*

NHS Mersey care trust



Savings

Total savings across the Mersey Care Trust sites have reached an average of 18% on annual electricity consumption. At Rathbone hospital annual savings of 51,573kWh and £5,446 on electricity bills have been achieved.

Customer Quotation

"We would highly recommend Powerstar voltage optimisation systems. The Powerstar installation at Mersey Care NHS Trust has achieved an 18% saving on total electricity consumption"



*Mark O'Grady, Managing Director,
MITIE Engineering Maintenance,
Facilities Management for NHS
Mersey Care Trust*

Whitbread Group Plc



Savings

The Whitbread group have installed Powerstar units into their hotel and restaurant sites at well known brands such as Premier Inn, Beefeater, Table Table, Taybarn and Brewers Fayre. Early results have proved impressive with a number of large hotel installations outperforming the guaranteed minimum levels of cost savings set by Powerstar and projected annual electricity savings of 18% across the group.

Customer Quotation

"As a responsible hotel and restaurant business, we need to ensure our customers enjoy a good nights sleep and great tasting menus served in a relaxed atmosphere.

We found Powerstar to be both professional and proactive in their awareness of the installation requirements during business operational hours, which ensured minimum disturbance for our guests."



*Chris George, Head of Energy and
Environment at Whitbread Hotel
& Restaurants*

Tower Hamlets Council



Savings

Tower Hamlets Council is in London's East End. It is one of the five host boroughs for the 2012 London Olympic Games. Annual savings in electricity consumption of 54,065kWh will be achieved following installation of a Powerstar unit at Albert Jacob House. This equates to annual savings of £6,411 and CO2 reduction of 30 tonnes per annum.

Customer Quotation

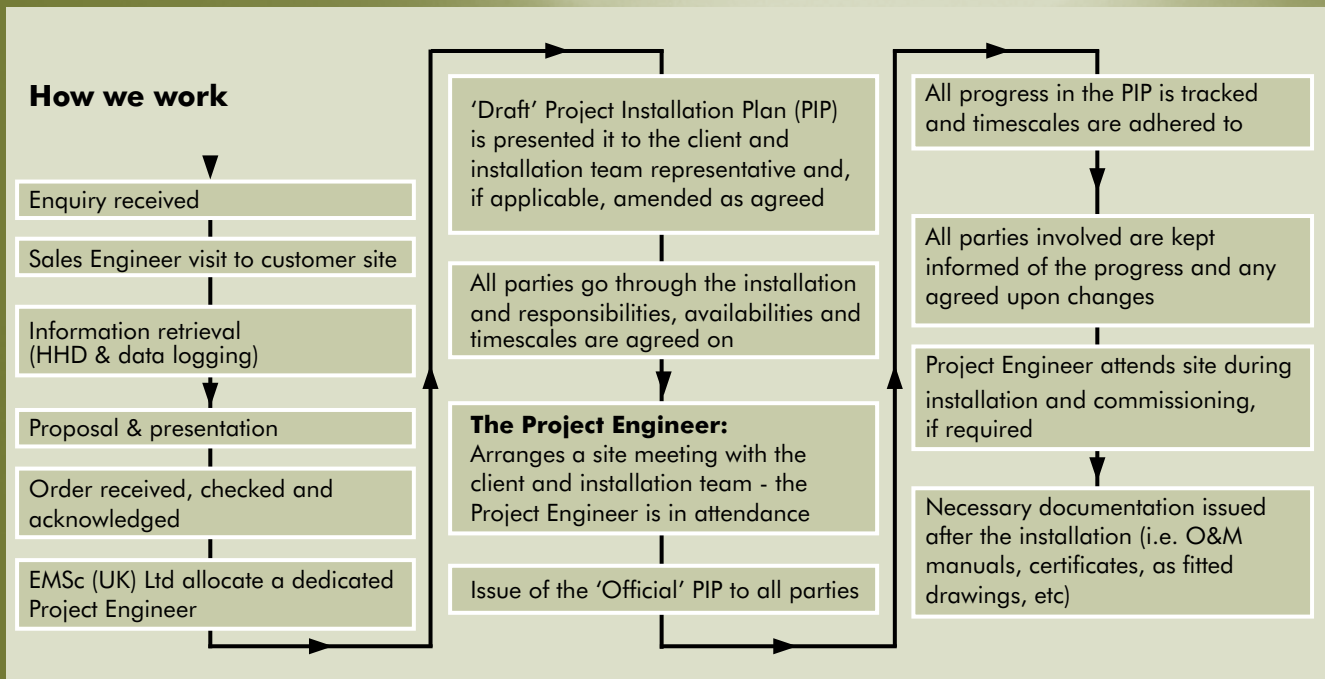
"Installing Powerstar will help the asset management drive to reduce carbon and energy consumption in Tower Hamlets, always striving to be lean flexible and green. Energy Services Team, Tower Hamlets"



Energy Services Team, Tower Hamlets

PROJECT IMPLEMENTATION & CAPABILITY MANAGEMENT

Powerstar installations range from one off installations to multi-site roll out programmes. An engineering led, project driven approach is always adopted to ensure the best solution is offered to the client as per the needs of site. Installations occur at the convenience of the client.



YES, WE 100% GUARANTEE HOW MUCH YOU WILL SAVE

Powerstar comes with up to **15 years warranty**, this includes parts and labour.

We guarantee savings as a percentage of kWh, as per our proposal. In the case we propose for example **10%** but you achieve **9%**, we will provide a one-off payment to compensate the loss.

THE NEXT STEPS:

- Get more information on Powerstar by visiting www.powerstar.co.uk or email us at powerstar@ems-uk.org
- Contact us to request a free no obligation consultation on 01709 836 200
- Attend an upcoming voltage optimisation training seminar to learn more and meet the team by visiting: www.powerstar.co.uk/events.html



The Powerstar Human - Machine Interface (HMI) shows every detail of the site electricity supply in real time.

WWW.POWERSTAR.CO.UK


100% British Engineered. 100% Guaranteed Results.

SALIX

CARBON
TRUST

ESTA
energy services and technology association

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ems
ENERGY MANAGEMENT SYSTEMS

EMSc (UK) Limited

7 Genesis Park

Sheffield Road

Rotherham, S60 1DX

T: +44 (0)1709 836200

E: powerstar@ems-uk.org

F: +44 (0)1709 821276

www.powerstar.co.uk | www.ems-uk.org

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