



powerstar[®]

Making your **power**
reliable, affordable,
and sustainable.



About Powerstar

Powerstar designs and manufactures power resilience technologies that enable your net zero carbon goals.

SMART POWER MANAGEMENT

Founded over 20 years ago by Dr Alex Mardapittas, Powerstar has grown to become one of the world's leading innovators of on-site power systems.


A range of Behind-the-Meter hardware and software, and broad technical expertise mean that Powerstar manages and optimises reliable, clean, and cheap power for its commercial and industrial customers.

Find out more about Powerstar at www.powerstar.com





RESILIENCE 






Resilience against
power disruptions **plus**
smart management of
multiple power flows

Power **Resilience**

The ability to continue your core activities without impact from disruption to your power supply.

A power disruption is not just a power cut. Short term voltage drops or spikes, power fluctuations and inconsistencies can reset equipment, interrupt activities, and shorten the life of your critical electrical equipment.

Powerstar technology provides power resilience to a whole site through any combination of three core technologies:

-  Innovative, Low-Loss Uninterruptible Power Supply (UPS)
-  Voltage Optimisation
-  Reliable, low-loss transformers

RESILIENCE+

Applications

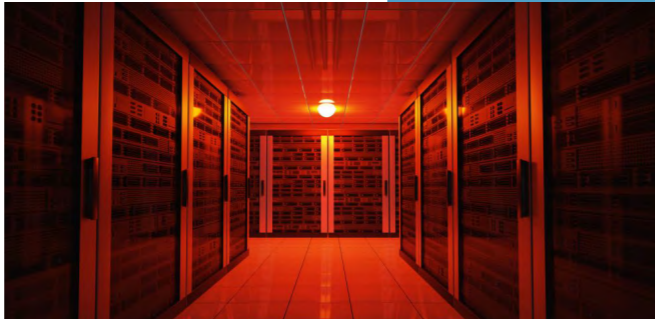
Powerstar can help your site achieve a variety of energy goals.

Not only are Powerstar's power resilience solutions highly efficient, but they can also be used to reduce energy costs and carbon emissions, improve sustainability, and more.

Whatever energy goals your site needs to achieve, Powerstar can manage and optimise the power flows to support them.



Reducing Energy Bills



Power Resilience



Battery Buffered EV Charging



Solving Grid Constraints



On-site Generation



National Grid Service Contracts


Technology

Powerstar designs and manufactures a range of hardware and software in two UK facilities. These technologies increase the resilience of a site's power supply while reducing energy consumption and CO₂ emissions.

The technology is all used "Behind-the-Meter", meaning that it is connected on your own site and impacts your site's energy use. It can be used stand-alone or in combination to achieve compound benefits.

Powerstar's range of bespoke technologies includes battery energy storage, voltage optimisation, transformers, and Energy Management Software.



 Battery Energy Storage




 Uninterruptible Power Supply




 Voltage Optimisation



 Transformers



 Energy Management Software

The Energy Trilemma

The Energy Trilemma is defined as the need to find balance between energy reliability, affordability, and sustainability. Balancing these 3 elements is vital for all commercial and industrial sites.

Powerstar's technologies can balance the 3 aspects of the trilemma in line with your own priorities. Voltage optimisation can reduce electricity consumption by 5-10%, while stabilising voltage to increase the life of electrical equipment. Battery storage systems can optimise the electricity you use to ensure it is as green and cheap as possible. Powerstar's unique UPS offering gives much higher energy efficiency without compromising performance.

Read more about the Energy Trilemma at:
www.powerstar.com/energy-trilemma



Reliable



Affordable



Sustainable

CASE STUDY

Parkinson-Spencer Refractories Ltd

Challenge

Parkinson-Spencer are a leading manufacturer of refractories and glass industry solutions, based in Halifax. Their site had been suffering from increasingly frequent blackouts due to disruption to their grid supply - resulting in lost profits.

Solution

Powerstar and GridBeyond worked together to support Parkinson-Spencer's objectives. Powerstar installed a 250kW Battery Energy Storage System, alongside a 500kVA MAX Voltage Optimisation system. The BESS provides site-wide Uninterruptible Power Supply, keeping the manufacturing process going in the event of a blackout. As well as further improving the sustainability of the site's energy infrastructure, the project also delivered a guaranteed 5% reduction in energy costs through Voltage Optimisation.

"The solution provided by Powerstar was a no brainer for our business."

Simon Parkinson, Managing Director of PSR



-  Manufacturing
-  Power Resilience
-  Solving Grid Constraints
-  Energy Efficiency
-  Battery Energy Storage
-  Voltage Optimisation
-  Uninterruptible Power Supply



Rotherham General Hospital






Challenge

Powerstar were engaged to supplement the hospital's power resilience strategy with an efficient, intelligent Battery Energy Storage System (BESS) with Uninterruptible Power Supply (UPS) functionality. As UPS systems are used to ensure critical care systems remain online in the case of a power disruption, it is vital that any proposed installations are tested to the most rigorous standards and will operate exactly as intended.

Solution

Powerstar provided the hospital with a BESS that also incorporated the rapid switching speed and reliability of a UPS. The BESS offers savings through greater energy efficiency of around £225,000 annually, as well as eliminating around 190 tonnes of CO₂e. Additionally, the BESS can be used to engage with Grid Services and Demand Side Response to generate additional revenue and further reduce electricity costs, as well as being used to store renewable electricity generated on-site.



-  Healthcare
-  Power Resilience
-  Reduced Energy Bills
-  Energy Efficiency
-  Battery Energy Storage
-  Uninterruptible Power Supply



Discover more case studies at:
www.powerstar.com/case-studies

Our Clients



"Powerstar identified waste that we did not think we had. They diligently overcame issues during commissioning and have provided us with a fault free system that saves what they promised."

MARK BOXALL
 Managing Director
 Tetra Pak CPS Ltd

"Powerstar 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."

MARK ORPIN
 Head of Energy Management
 ASDA Supermarkets

"Everyone was so passionate about the product and its benefits for the environment. It was an easy decision to make as it is in line with everything ourselves and our parent company are aiming to achieve on the sustainability side of the business."

KEN JACKSON
 Maintenance Manager
 Nutricia

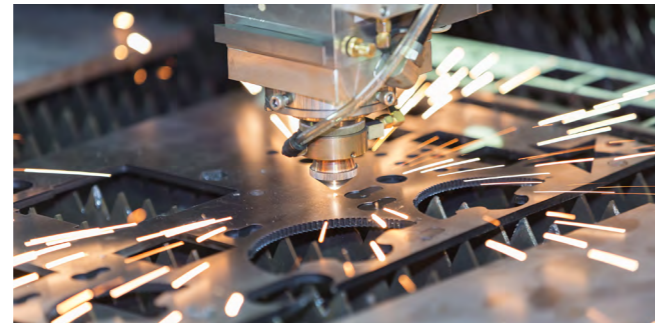
Sectors

All commercial and industrial energy users benefit from improved quality and resilience of their power supply.

The sectors highlighted here have power resilience as a critical requirement.

Automation, robotics, PLC control, life support systems, data servers, and critical infrastructure cannot afford to suffer from even the slightest power disruptions and fluctuations.

Find out more about how these sectors are supported at www.powerstar.com



Manufacturing



Healthcare



Food & Drink



Data Centres



Public Sector



Distribution & Logistics



Transport



Retail & Leisure



Defence



All our technologies
are designed and
manufactured in the UK.



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Power resilience
for a net zero world