



WILSON
POWER SOLUTIONS

Responsible Power Engineering

**YOUR PARTNER FOR ENERGY EFFICIENT
COST EFFECTIVE AND RELIABLE
POWER DISTRIBUTION SOLUTIONS**



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FIVE REASONS TO BUY FROM WILSON POWER SOLUTIONS

1 TECHNICAL EXPERTISE YOU CAN RELY ON

From the smallest polemounted transformers to 132kV power transformers, our commitment to engineering excellence, product innovation and dedicated customer service have helped make us the preferred power engineering partner for some of the UK's biggest companies.

4 MORE THAN JUST A TRANSFORMER MANUFACTURER

We understand power distribution systems. That's why our transformer offering is backed by associated equipment including battery chargers, switchgear and LV cabinets to deliver a complete equipment package with a "one stop shop" philosophy for complete ease of mind.

2 SMALL ENOUGH TO CARE, LARGE ENOUGH TO DELIVER

We're nimble, agile and friendly. We believe in building lasting partnerships with our workforce, our customers, our suppliers and communities both locally and internationally. We care about your business, strive to help you find the best power distribution solution for your needs and promise to deliver the highest standards of product performance and customer service.

5 TOTAL COST OF OWNERSHIP YOU CAN COUNT ON

Pioneers of super low loss amorphous transformer technology, our market leading products have helped hundreds of organisations avoid unnecessary energy wastage, reduce operating costs and generate impressive savings that typically start adding to the bottom line within three years.

3 LOGISTICAL SOLUTIONS THAT DELIVER THE GOODS

We work hard to streamline our processes and manufacturing times so that you get the equipment you need with impressively short lead times and on pre-agreed delivery dates.

**WE ARE PROUD
TO PROVIDE
EFFICIENT POWER
SOLUTIONS FOR**

TESCO

UB
United Biscuits

sse
Enterprise

McCam

U
Unilever

UK Power Networks
Delivering our energy

N NATURAL HISTORY MUSEUM

ASDA

NHS

electricity north west

GROWING THROUGH THE YEARS



RICHARD WILSON

started the company rewiring cars and providing general electrical contracting.

Richard Wilson buy and sell electric motors and starting equipment.

1946

1950's

OUR VISION

To be a family company with a conscience providing innovative, sustainable energy infrastructure solutions.

OUR MISSION

We are committed to growing our business by continuing to deliver customer driven, tailored solutions and outstanding levels of service, whilst investing in the development of new and improved power distribution products and services.



Richard Wilson provide reconditioned pumps to the oil industry. The company acquires two small properties and a storage facility in Stanningley, Pudsey.



LATE 1950'S & EARLY 1960'S

DENNIS & COLIN WILSON

sons of Richard Wilson, joined the business. They expanded the pump business into ministry contracts as well as the oil industry and were now doing some international work, extending the product profile to flameproof motors and equipment.



1973/4



ABOUT US

Wilson Power Solutions is based on a unique customer and professional approach that has been developed over 70 years in the industry.

Today, Wilson Power Solutions is managed by the third generation of the Wilson family who like their business to remain agile and friendly. Dedicated to helping customers find the best power distribution solutions for their individual needs, we are passionate about our expert knowledge and committed to giving advice with our customers' best interests at heart.

We treasure our heritage and know that our hard-earned reputation for service excellence and superior product performance has grown out of 70 years of experience in the power engineering sector.

THE BEST SOLUTION FOR YOUR POWER NEEDS

Recognising the importance of integrity and reliability, we believe in building lasting partnerships with our customers that are based on a unique service based on technical knowledge, superior product performance and mutual trust.



The 3 day week and the sale of generators create a cash injection.

“ We believe in building lasting partnerships with our people, our customers, suppliers and our communities, both locally and internationally. ”

ERIKA WILSON MANAGING DIRECTOR





POWER TRANSFORMERS



We design, manufacture, supply and install cold rolled grain oriented steel (CRGO), double wound power transformers up to 200 MVA. Our power transformers are available both liquid filled (typically Oil or Midel) or dry type (Cast Resin).

SUPPORT AND COMPLIANCE

We support all power transformer projects with a dedicated project manager and deliver a bespoke solution that is tailored to your needs. We believe in a continuous improvement policy and ensure that our power transformers comply with the highest standards of modern power systems.

All of our transformers are manufactured in accordance with internationally recognized standards (BS, IEC and ANSI) and comply with internationally recognised energy efficiency standards such as the EU Eco Design Directive for transformers (where applicable).



*Transformers are manufactured in accordance with internationally recognised standards for electrical transformers (BS, IEC and ANSI). Extended warranty times can be provided where required.



I wanted to develop a relationship, something that was more than "How do you buy transformers -I can do that with Wilson's.

MANAGING DIRECTOR ESM POWER LTD

DENCOL ENGINEERING LTD
was formed.



Larger motors and starting equipment up to 2500kW provided to oil refineries and general industries.

24 MONTH WARRANTY

Our power transformers come with an industry leading 24 month warranty from dispatch.*



YOUR BENEFITS

- Short lead times
- Dedicated project manager
- Modern technology
- Proven quality and reliability
- Engineering support
- Custom specifications

TYPICAL APPLICATIONS

- Step down distribution transformers
- Step down network transformers
- Step up generation transformers
 - Wind farm transformers
 - Solar PV farm transformers
- Motor starting transformers
- 6 Pulse and 12 Pulse rectifier transformers
- Earthing transformers
- Isolation transformers

TYPICAL ACCESSORIES

- Oil temperature indicator (OTI)
- Winding temperature indicator (WTI)
- Magnetic oil level gauge (MOG)
- Forced fan or pumped cooling
- Marshalling box
- Pressure relief device (PRD)
- AVR relay and control panel
- Radiator valves
- Dehydrating breather

A change of name: the company becomes

RICHARD WILSON (DENCOL) LTD

1976



24 MONTH WARRANTY

Our Wilson e1 CRGO transformers come with an industry leading 24 month warranty from dispatch.*

DISTRIBUTION TRANSFORMERS



I have worked with Wilson Power Solutions on a number of projects. I've always found them helpful and particularly value their flexibility with regards to custom requirements.

HV REGIONAL MANAGER SSE ENTERPRISE CONTRACTING



Wilson e1 -
Cost effective Eco Design (Tier 1)
compliant distribution transformers.
The perfect choice for budget
sensitive projects.

We design, manufacture and supply a comprehensive range of cold rolled grain oriented (CRGO), double wound distribution transformers that can be supplied both liquid filled (Oil or Midel) or dry type (Cast Resin).

QUALITY STANDARDS COMPLIANCE

Committed to continuous improvement through our team of technical managers, we are following global material, technology and application developments closely, ensuring that our transformers are designed to comply with and satisfy the high demands of modern distribution networks.

All of our transformers are manufactured in accordance with internationally recognized standards (BS, IEC and ANSI) and and comply with energy efficiency programs such as the EU Eco Design Directive for transformers (where applicable).



YOUR BENEFITS

- Modern technology
- Short lead times
- Proven quality and reliability
- Long life cycle with low maintenance
- Guaranteed buy-back for end-of life plant

TYPICAL APPLICATIONS

- Step down distribution transformers
 - pole or ground mounted
- Step up generation transformers
 - Wind farm transformers
 - Solar PV farm transformers
- Motor starting transformers
- 6 Pulse and 12 Pulse rectifier transformers
- Earthing transformers
- Isolation transformers

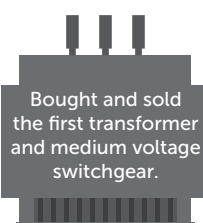
TYPICAL ACCESSORIES

- Oil temperature indicator (OTI)
- Winding temperature indicator (WTI)
- Magnetic oil level gauge (MOG)
- Forced fan cooling
- Marshalling box
- Pressure relief device (PRD)
- AVR relay and control panel
- Bi-directional rollers
- Radiator valves
- Dehydrating breather

NEED A TRANSFORMER IN A
HURRY? GET EXPRESS DELIVERY
FOR STANDARD RATINGS
WITHIN A WEEK!

*Transformers are manufactured in accordance with internationally recognised standards for electrical transformers (BS, IEC & ANSI).

Extended warranty times can be provided where required.



Bought and sold
 the first transformer
 and medium voltage
 switchgear.

It was in reality a '**no brainer**' to select the Wilson e2 for two recently completed substation upgrade projects.

ELECTRICAL DESIGN ENGINEER,
THE UNIVERSITY OF WARWICK



Our Wilson e2 amorphous range is the industry leading super low loss transformer product.

Providing lowest combined transformer losses, total cost of ownership considerations are almost always favourable generating impressive life time energy savings that will typically start adding to your organisations bottom line within three years.

SUPER LOW LOSS AMORPHOUS TRANSFORMERS

UNRIVALED PERFORMANCE AND RELIABILITY

Pioneering amorphous technology, the Wilson e2 has been the first super low loss transformer in the UK – launched in 2009 it has helped organisations across a wide range of sectors reduce energy costs and lower emissions.

CUTTING TRANSFORMER LOSSES FURTHER

Two types of energy losses are important in the running of distribution transformer.

1 LOAD LOSSES THAT VARY AS A FUNCTION OF TRANSFORMER LOADING

2 NO-LOAD LOSSES THAT OCCUR IN THE TRANSFORMER CORE

Core losses are continually present from the day the unit is energised, that is 24h a day, 365 days of the year.

Wilson e2 transformers combine amorphous metal cores with low current density conductors. The result: The UK's most energy efficient transformer with lowest combined transformer losses providing you with guaranteed, easily quantifiable energy savings for your organisation.



**EXCEEDS
STRICT TIER 2
(2021) EU ECO
DESIGN
SPECIFICATIONS**



TESCO

We're happy to recommend the Wilson e2 transformer as a part of an integrated approach to energy savings.

TESCO TECHNICAL STANDARDS MANAGER

Join the Amorphous
REVOLUTION

**FAVOURABLE TOTAL COST
OF OWNERSHIP: GET PAYBACK
IN 3 YEARS OR LESS!!**

THE WILSON E2 PROVIDES TWO AREAS OF SAVINGS

1 GUARANTEED SAVINGS THROUGH REDUCED TRANSFORMER LOSSES

Our Wilson e2 transformer combines amorphous core material with low current density conductors to provide lowest combined transformer losses. Based on an average 25-year transformer lifespan, a 1000kVA Wilson e2 transformer achieves typically £35,000 (15,000 kWh/pa @£0.095) through loss savings alone when compared with a modern, eco design compliant CRGO transformer.

Savings from replacing an existing older transformer with the e2 will be significantly higher and typically cut energy bills by £3,500 per year.

2 SUBSTANTIAL POTENTIAL SAVINGS THROUGH VOLTAGE MANAGEMENT

The Wilson e2 is designed to deliver a reduced secondary voltage (415V instead of 433V). In addition the units feature an extended tapping range as standard thus allowing you to reduce site voltage at source without the need for additional dedicated voltage management equipment.

Extension of a transformer hire fleet to cope with overseas demand.

Move to Westland Works, Westland Square, Leeds.

1980'S

1985



Many sites in the UK are supplied by a higher than optimal voltage that is responsible for significant energy losses in voltage dependent equipment.

**24 MONTH
WARRANTY**

VOLTAGE MANAGEMENT

Voltage Management is an energy saving technique that reduces these unnecessary losses by improving voltage to site. The Wilson e2 transformer comes with in-built voltage management capabilities that allow for easy adjustment to LV site voltage without the need of costly additional equipment.

Depending on site supply voltage and your site's load profile, managing voltage through a supply transformer can reduce energy consumption by up to 12% with customers typically achieving savings of 3-8%.

Depending on your supply voltage and the voltage dependent loads at site you can achieve reductions of up to 12% in electricity consumption. In addition, equipment life can be prolonged as a result of improved operating conditions.

In order to assess the savings potential of your site your incoming supply needs to be monitored and your load profile analysed.

**REDUCE
UNNECESSARY
ENERGY
WASTAGE AND
CUT ELECTRICITY
BILLS**

THE FIXED TAP SOLUTION

The Wilson e2 is designed to provide a lower nominal voltage and comes with an extended tapping range allowing you to adjust site voltage without the need for costly additional equipment.



SIMON WILSON
joined the business

Started manufacturing own range of battery tripping units.

1989

1991



NHS

An extremely cost effective infrastructure upgrade that not only provides guaranteed energy savings through reduced transformer losses but delivers substantial additional savings through inbuilt voltage management capabilities.

NHS ESTATES MANAGER

THE DYNAMICALLY REGULATED SOLUTION

The Wilson e2+ is a super low loss amorphous transformer with a 17 position on-load tap changer that dynamically adjusts LV side voltage allowing you to maximize energy savings whilst safeguarding security of supply through buck and boost technology.

Typical applications include sites where supply voltage fluctuates significantly (this can be irregular peaks and troughs as well as distinct day and night patterns), where a constant output voltage is required (for example operating highly sensitive equipment) or to increase your sites' resilience in view of increasingly dirty supply from the grid.



IMPROVE YOUR INFRASTRUCTURE FOR ENERGY EFFICIENCY & RESILIENCE

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ASDA

The Wilson e2+ is saving the store 285,000 kWh per year.

Providing a cost-effective and space saving alternative to dedicated Voltage Management systems.

//

THE BENEFITS OF DYNAMIC SUPPLY VOLTAGE REGULATION:

- Maximises energy savings from voltage dependent loads
- Provides controlled operating conditions
- "Buck and boost" to safeguard against voltage spikes and drops
- Enables small scale renewable integration

Employ overseas companies to manufacture distribution transformers.

**POWER AND
DISTRIBUTION
TRANSFORMERS LTD**

SWITCHGEAR & CABINETS

I would like to commend your company on the quality of workmanship and prompt delivery to site. All alterations carried out were of a very high standard and all aspects related to the installation went very well.

COMPANY DIRECTOR R&B SWITCHGEAR SERVICES LTD

To complement our transformer supply, Wilson Power Solutions stocks a wide range of new MV switchgear that can be close coupled or free standing.

MV SWITCHGEAR

We regularly supply switchgear equipment of the following manufacturers:

- Schneider (Ringmaster Range) RN2c, CN2, SN6, CE2, CE6, SE6
- Lucy (Sabre)
- Eaton (Xiria)

EX WORKS AVAILABILITY

- Schneider (Ringmaster Range) of equipment both extensible and non-extensible types.

Other manufacturers available on request.

LV CABINETS

On the low voltage side of a transformer, Wilson Power Solutions supplies a range of close coupled LV circuit breaker cabinets up to 4000 Amps and in line fuse cabinets up to 1600 Amp.

FEATURES & BENEFITS:

- Removable front panels for ease of installation on site
- Top or bottom cable entry
- Metering
- Protection relays (such as G59)
- Restricted or unrestricted Earth Fault
- Surge Protection

All of our cabinets are secure, feature a weatherproof housing and are designed to provide long and reliable product life.

Sold the first power transformer at 12/25MVA to Aggreko in Sri Lanka.



ERIKA WILSON
joined the business.

Manufactured a 30/40MVA at 90kV/15kV transformer in 13 weeks for a company in Chad.

Manufactured 4 reactors as the main power input to a Russian oil field.

12 MONTH WARRANTY

Our Chargetec battery chargers and battery monitoring solutions come with an industry leading 12 month warranty from dispatch.

BATTERY CHARGERS & BATTERY MONITORING

We design and manufacture a comprehensive range of industrial battery chargers and battery monitoring systems at our Leeds factory.

Our Chargetec battery chargers are compact, smart and available in 24 Volts, 30 Volts, 48 Volts and 110 Volts DC. Optional monitoring equipment includes high voltage and low voltage alarms, earth leakage alarms, battery impedance, mains failure, low voltage disconnect and general battery alarm monitors.

OUR CHARGETEC RANGES

ECONOMY - C200 RANGE

The C200 range provides basic back-up battery trip supply with small standing load capabilities (4A) and 2.5Ah battery backup.

INTERMEDIATE - C300 RANGE

The C300 range provides a constant voltage charger with a range of alarms and a standing load capability of between 4A and 10A. It comes with 8Ah batteries and a Low Voltage Battery Disconnect to protect the batteries from Deep Discharge.

ADVANCED - C400 RANGE

The C400 range provides a constant voltage charger with a wide range of alarms. This range is suitable for larger battery and /or standing load capabilities. This is typically between 24-26Ah batteries with 5-14A standing load and a Low Voltage Battery Disconnect to protect the batteries from Deep Discharge*. Dual output for high current closing coils can be provided.

BESPOKE - C500 RANGE

The C500 range offers highly customised solutions to suit your specifications.



Started manufacturing low voltage ACB and pillar feeder cabinets.

2003

Designed and manufactured 6 X 30/40MVA, 132/33kV power transformers to NEPA Nigeria.

Manufactured containerised switchgear packages to Iraq.

2004/5

Opened design and tendering office in India.

2006



A cost effective, reliable alternative - skillfully re-engineered power and distribution transformers and switchgear.

With over 70 years of heritage in re-engineering, we promise to make full use of existing resources, to reduce the amount of industrial waste wherever possible and to provide you with a responsible solution to your power needs.

24 MONTH WARRANTY

Our Re-engineered distribution and power transformers and MV/LV switchgear come with a 24 month warranty from dispatch.

RE-ENGINEERED EQUIPMENT

OUR TRANSFORMER RE-ENGINEERING CAPABILITIES INCLUDE THE FOLLOWING:

- Detanking
- Core inspection and core stoving
- Full tank overhaul and replacement of all seals and gaskets
- New cable box and bushings where required
- Tap switch assessment
- Upgraded cooling systems
- Oil replacement
- Re-assembly and painting
- Testing and despatch to BSEN60076



RE-ENGINEERED DISTRIBUTION TRANSFORMERS:

- 100kVA up to 3000kVA oil immersed ONAN, midel filled KNAN and dry type cast resin
- Primary voltages typically 3.3kV, 6.6kV, 11kV and 33kV
- Dual ratio transformers
- Step up or step down
- 24 month complimentary warranty



RE-ENGINEERED POWER TRANSFORMERS:

- Up to 60MVA
- Primary voltages typically 11kV, 33kV, and 132kV
- Step up or down
- OLTC
- ONAN/ONAF
- 24 month complimentary warranty



RE-ENGINEERED MV/LV SWITCHGEAR

- Large range of UK manufactured equipment from diverse manufacturers including:
- Reyrolle, GEC, Ottermill, Schneider, Merlin Gerin, Yorkshire Switchgear, Brush, Long & Crawford, Ellison, Alstom, ABB, MEM, Dorman Smith, Allenwest, Wallacetown, Whipp & Bourne, W. Lucy
- 24 month complimentary warranty



The **Wilson e2 super low loss amorphous** metal transformer is launched.

2008



Leading supermarket chains install the Wilson e2 transformer, utilities start testing the technology.

2008/9

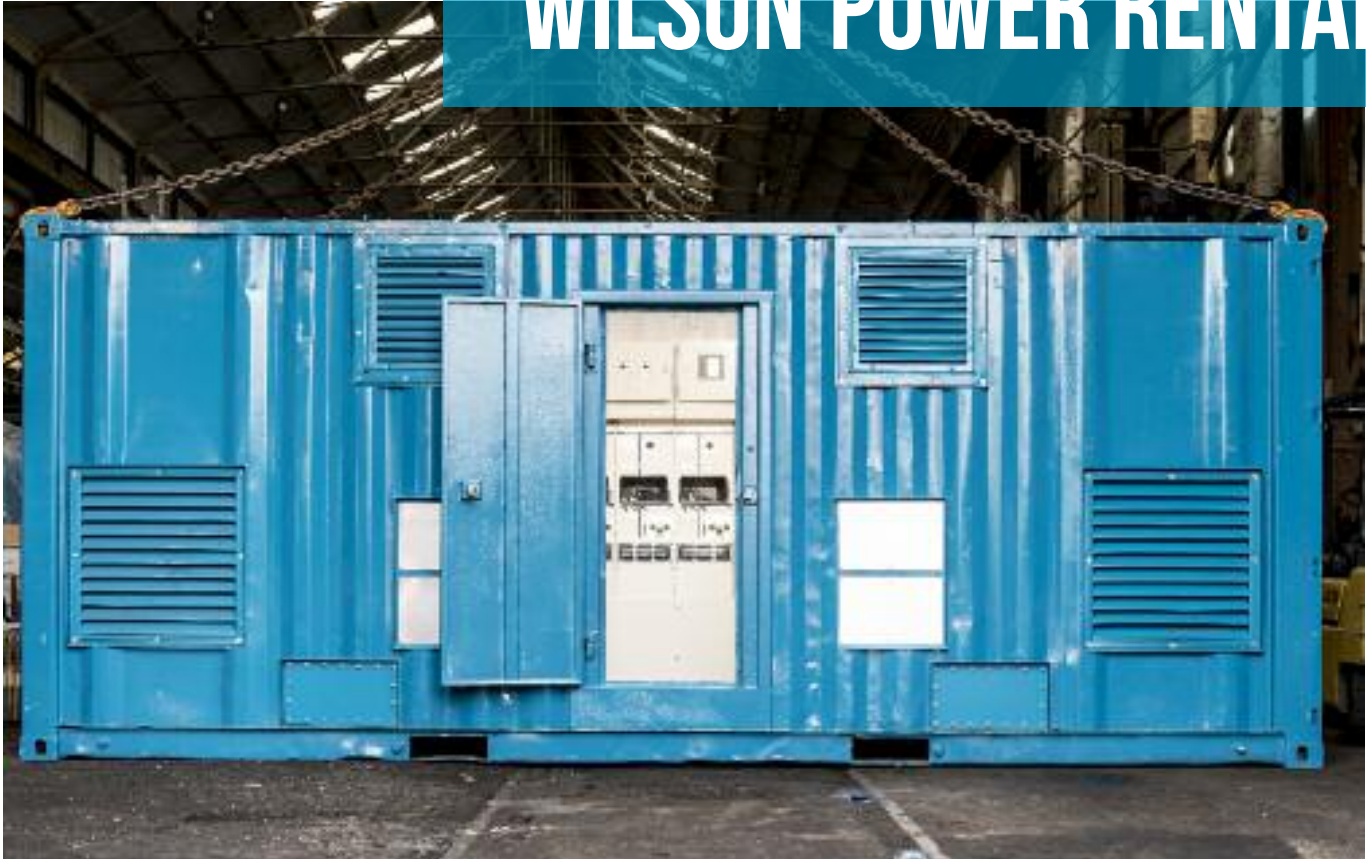
Wilson Power Rentals are always quick to respond, their hire equipment is well maintained and I would not hesitate to recommend them!

AGGREKO



YOUR PARTNER FOR TEMPORARY POWER EQUIPMENT NEEDS

WILSON POWER RENTALS



With approximately 80 MVA of containerised hire fleet, Wilson Power Rentals offers an ideal solution to customers who need to quickly supplement their own equipment resources or who may require equipment to cope with an emergency.

You can take reassurance from the fact that Wilson Power Rentals can always support you with a comprehensive hire fleet of power distribution equipment for temporary power, testing and plant failure applications.

OUR IMMEDIATELY AVAILABLE EQUIPMENT INCLUDES:

- Step up transformers
- LV transformers
- LV auto transformer starters
- Inverters and soft starts
- Direct on line starters up to 11kV
- 2500 kVA Multi-tapped transformers
- 3500 kVA Multi-tapped transformers
- Step down transformers
- Containerised substations
- Transformer rectifiers
- Voltage regulating transformers

Typical applications include:

GENERATOR LOAD BANK TESTING

We have a vast range of electrical transformers that can be used on MV supplies where the voltage is required to be dropped to a suitable level to feed the load bank.

E.g. step down transformer 2500kVA 11000/415v ONAN Dyn11.

TEMPORARY POWER INSTALLATIONS

In conjunction with a generator where the voltage has to be stepped up to grid voltages such as 11kV or 33kV to feed the local area where power has been lost.

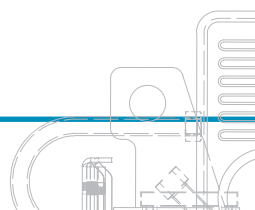
E.g. step up transformer 2500kVA 415v /11000 volts ONAN YNyn0

IN HOUSE TEST FACILITIES

- Direct on line starters up to 13.8kV for pump and motor testing
- Voltage transformer
- Metering current transformers

PLANT FAILURE

Call Wilson Power Rentals for a quick and secure solution in case of emergency plant failure.





SITE SERVICES

We have extensive experience of carrying out on site modifications to low and medium voltage equipment. Membership of the Electricity Association (EA) allows us to lift SOPs (suspension of operating practice) from your existing equipment.

Regional electricity companies along with small and large industrial customers often require us to attend site and add metering, upgrade protection, or change current transformers.

Due to our comprehensive stock of re-engineered equipment we can modify panels using the original manufacturers' components, as well as supply and fit new ASTA certified parts.

//

I would like to thank you for your valued help resolving the two recent problems regarding transformer leak and replacement switchgear. Please thank your site staff for the professional way they carried out the work on site yesterday.

UK POWER NETWORKS



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TRUSTED BY MAJOR INDUSTRIAL USERS AND NATIONAL UTILITY COMPANIES

PROTECTION SERVICES:

- HV & LV Protection & grading studies
- Protection systems setting & commissioning

UPGRADES:

- Compound to air busbar chambers & cable boxes for dry type terminations
- Metering upgrades - analogue to electronic digital
- Protection/metering current transformers
- Protection relay upgrades - Areva Micom, Areva K-series, ABB, Argus, Schneider, Sepam, GE
- New inter tripping relays
- Translay
- Relay
- Restricted Earth Fault
- Voltage transformers

SAFETY & TRAINING:

- Extensively trained HV switching engineers
- CITB safety passports carried by all on site staff



The Wilson e2+ is launched.



Business renamed
Wilson Power Solutions Ltd.



"We take a responsible interest in the environmental impact of our business activities."

SIMON WILSON MANAGING DIRECTOR



WE'RE POWERED BY SOLAR PV

Our Leeds manufacturing site is powered by a dedicated 65 kW Solar PV system designed to generate enough electricity to make us self-sufficient. Who says the sun doesn't shine "up north"?



Wilson Power Solutions board of directors
Simon Wilson, Duncan Crossland and Erika Hudson (nee Wilson)

THE BEST SOLUTION FOR YOUR POWER NEEDS

Recognising the importance of integrity and reliability, we believe in building lasting partnerships with our customers that are based on a unique service based on technical knowledge, superior product performance and mutual trust.

Design and manufacture of 3 x 50MVA, 132kV/33kV power transformers for Solar PV farms in Norfolk and Cornwall.

2014



The Wilson E1 ecotrans is launched.

2015



The Wilson e2 eco is launched.

WILSON
e2 AMORPHOUS



DUNCAN CROSSLAND
joined the business.

2016



Responsible Power Engineering

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