

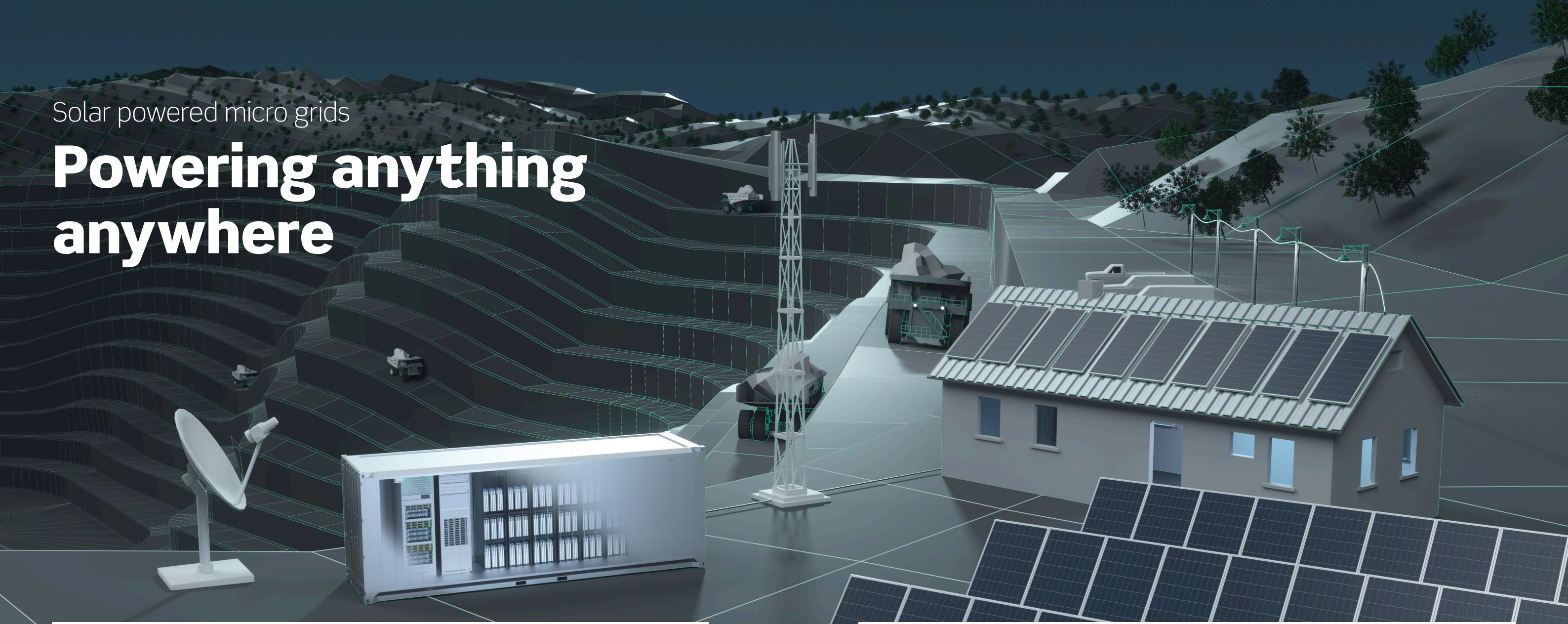
Complete micro grid power solutions

**Make the most of the  
energy from the sun**



Solar powered micro grids

# Powering anything anywhere



Providing electricity to remote places from national grids can be very costly, time consuming and in many cases not even possible. As solar energy is becoming more attractive, small autonomous grids are established to meet this demand. Eltek's Solar Power solutions make micro grids efficient, sustainable and scalable - and they are built to last.



## Industrial installations for industrial scale application

Off-grid locations like mining or construction sites can benefit from Eltek's modular solar micro grids. All electric power to offices, communication equipment, lighting and other important functions can be powered reliably, cost effectively and with a minimum of environmental impact.

### Reliable

Eltek equipment has proved its quality in the harshest environments through thousands of installations in off-grid or poor-grid areas. Modularity allows for redundancy. In the unlikely event of a failure, the system will remain operational and modules can be replaced in seconds, without interfering with system operation.

### Stable power even with an unstable grid

Demand for electricity is constantly increasing and investments in the distribution network is lagging behind. This results in unstable grids with frequent planned or accidental outages. With a solar micro grid in your facility the important equipment is always powered, and the electricity bill is reduced.

## Village power

Around the world, 1.3 billion people lack access to electricity. This limits the possibility for economic growth and improved quality of life. Solar powered micro grids is the most cost effective way to provide electricity to these areas. Eltek's solar micro grids provide power to entire villages allowing the people to use modern appliances, to hospitals and schools to run more efficiently, and giving local entrepreneurs the tools they need to grow their business.

### Modularity

The Flatpack2 Solar Power System is a modular and flexible system designed to provide safe and reliable supply of electricity. The modularity enables fast and efficient matching of daily energy and power requirements from the AC output.

### Stay in control

Each system is equipped with an advanced, yet easy to use, controller that monitors and controls the whole system. It also allows for remote access from a browser or via the MultiSite Monitor tool, which provides total overview over all sites and ensures optimal operation of the installed equipment.



Some of our projects

# We know off-grid power

We have installed more than 10,000 solar sites in remote areas across the world. Our customers include the UN, organizations and companies that strive to make electricity available for everyone.

## Eltek have provided solar energy for hospitals in Zimbabwe under the UNDP program "Solar for Health"

Having fully operational hospitals is vital to any society, and in rural Zimbabwe access to electrical power is a challenge to providing health services to the population.



In cooperation with the United Nations Development Programme (UNDP), Eltek has delivered complete photo voltaic solar solutions for 104

hospitals in Zimbabwe. Green sustainable power light up the hospitals and keeps medical machinery running. In addition, refrigeration of medicines is a critical need that has improved with the new power systems.

Eltek provide full delivery, installation, service and monitoring of the solar systems in which Eltek's breakthrough Rectifier technology is the key component. Most of these systems are installed in areas with very unstable and unreliable grids. The Eltek systems have the functionality to seamlessly draw energy from the best source available. In this way these hospitals get reliable power for their most critical functions and facilities. The hospitals will also significantly reduce their electricity bills.

The "Solar for Health" program is aimed at health facilities across Africa, the Arab States and Central Asia and addresses several of the main "Sustainable Development Goals" identified by the UN.

## Switching on the power for the first time - big impact for a small village in Bokosso

Deep in the African rainforests, the village of Bokosso in Cameroon was able to turn on the power switch for the first time in history in August 2017. The villagers celebrated all night long in the light that beamed through the village for the first time. With electricity in place, cable TV and internet is now available and more importantly it will pave the road

for further economic growth. Eltek provided a full turn key solution, utilizing local workforce and building local competence when installing the solution.

While Bokosso now lights up for the first time in history, the work continues elsewhere. Under the agreement between SunErgy and the government of Cameroon, a total of 92 villages will be given electricity by the end of 2018.



This will give 600,000 people a new outlook on life, and enable them to share the comforts we often take for granted ourselves.

## Eltek brings solar power to the Arctic islands of Spitsbergen

In the land of eternal winter Eltek has turned a telco site hybrid to lower operator cost and ease the impact of a fragile environment. Introducing solar power enables the saving of expensive fuel runs with helicopter as well as lowering CO2 emissions from freight as well as diesel running time, in a particularly fragile environment.

With harsh winds and plenty of snow, the site sometimes resembles more of an ice sculpture than a piece of modern communication infrastructure.



One would think that the Arctic would not be the most economic place to install a solar hybrid system. However, considering the difficult access for diesel refill, which is by helicopter only, and the long hours of sun in the summer, Eltek has made it pay off.

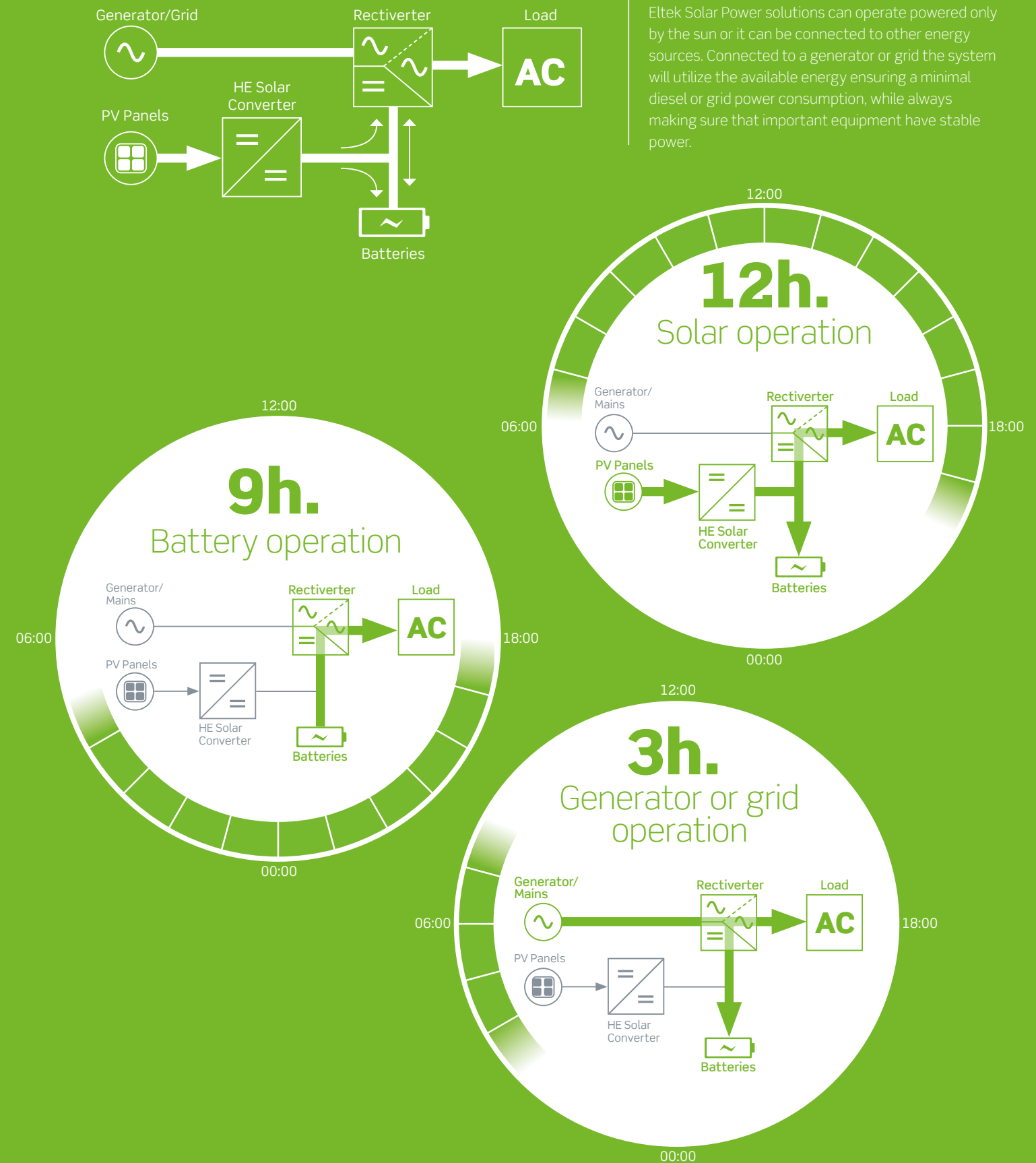
This installation is in Svalbard, a Norwegian archipelago only 1300 kilometers from the North Pole. In this harsh environment, running telecom sites in extreme conditions, Norwegian operator Telenor has turned to Eltek.

Solar powered micro grids

# How it works

Providing pure solar power or stabilizing power in poor grid areas

Eltek Solar Power solutions can operate powered only by the sun or it can be connected to other energy sources. Connected to a generator or grid the system will utilize the available energy ensuring a minimal diesel or grid power consumption, while always making sure that important equipment have stable power.



# Product portfolio

The Flatpack2 Solar Power Systems are modular and flexible and designed to provide safe and reliable supply of AC (and DC) power in remote off-grid or poor-grid locations.

A variety of standard systems with capacities up to 102kW solar capacity and 72kVA output are available. The modularity makes it possible to match energy and power requirements, high reliability and simple service. Each system is equipped with an advanced, yet easy to use, controller that monitors and controls the whole system. It also allows for remote access from a browser or via the Multisite Monitor tool, which provides total overview over many sites and ensures optimal operation of the installed equipment.

## The building blocks



### Flatpack2 HE Solar

The combination of innovative design, efficiency and reliability makes the Flatpack2 HE solar stand out. With the Maximum Power Point Tracking (MPPT) algorithm ensuring close to 100% panel utilization and an efficiency up to 96.5%, the galvanic isolated solar charger sets new standards for renewable power in telecom.



### Rectiverter

The Rectiverter is a unique converter combining the functions of a rectifier and an inverter in one module. It acts as a power router providing AC power from the best available source - PV panels, battery or the AC input. It will even charge the batteries when AC is available from the grid or a generator.



## Solar Power System 18 kVA

### Key features

- Max output: 18 kVA
- Configuration: TN 3 phase, 400VAC
- Max PV capacity: 38,4 kW
- Cable entry: Top and bottom
- Housing: IP20 <sup>1)</sup>
- Dimensions (h x d x w): 2000 x 600 x 600 mm

### Typical applications

- Small hospitals
- Refugee camps
- Construction camps
- Office buildings
- Water pumps



## Solar Power System 36 kVA

### Key features

- Max output: 36 kVA
- Configuration: TN 3 phase, 400VAC
- Max PV capacity: 51,2 kW
- Housing: IP20 <sup>1)</sup>
- Cable entry: Top and bottom
- Dimensions (h x d x w): 2000 x 600 x 600 mm

### Typical applications

- Small villages
- Hospitals
- Refugee camps
- Construction camps
- Office buildings
- Water pumps



## Solar Power System up to 6 kVA

### Key features

- Max output: 6 kVA
- Configuration: Single phase
- Max PV capacity: 12,8 kW
- Housing: IP55 (indoor or outdoor installation)
- Thermal management: Fan & filter
- Dimensions (h x d x w): 1048 x 543 x 586 mm

### Typical applications

- Health clinics (refrigeration, lighting etc.)
- IT, communication and office equipment
- Private household



## Solar Power System up to 12 kVA

### Key features

- Max output: 12 kVA
- Configuration: Single phase
- Max PV capacity: 25,6 kW
- Housing: IP55 (indoor or outdoor installation)
- Thermal management: Fan & filter
- Dimensions (h x d x w): 1048 x 543 x 586 mm

### Typical applications

- Health clinics/small hospitals
- Local administration buildings
- Offices
- Private household



## Solar Power System 72 kVA

### Key features

- Max output: 36 kVA
- Configuration: TN 3 phase, 400VAC
- Max PV capacity: 102,4 kW
- Housing: Dual cabinet, IP20 <sup>1)</sup>
- Cable entry: Top and bottom
- Dimensions (h x d x w): 2000 x 600 x 1200 mm

### Typical applications

- Villages
- Hospitals
- Refugee camps
- Construction camps
- Office buildings

1) Normal operating conditions as per IEC 62040-5-3:2016 clause 4.2. Other operating conditions as per IEC 62040-5-3:2016 clause 4.3, must be advised



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# EXPERIENCE THE POWER.

At Eltek, we are power experts with a sharp focus; to develop and provide our customers all over the world with the greatest power solutions available for applications used in an industrial context - where stable, safe and efficient supply of power is crucial.

This has been our passion and motivation for more than 40 years: to innovate and lead the way in power conversion and control. Today, we help our customers optimize and safeguard the operation of business-critical equipment, reduce their carbon footprint, while, at the same time, reduce the total cost of ownership of their power supply equipment.

Nordic by birth, we have grown to service all countries and cultures, offering the best global technology and solutions matched to local requirements.

The combination of superior expertise, advanced solutions, responsive support and service, makes it possible for our more than 2,000 passionate and proactive power experts worldwide to provide our customers with a unique, powerful experience.

**[www.eltek.com](http://www.eltek.com)**  
**[telecom@eltek.com](mailto:telecom@eltek.com)**