



Fully Customised DC Power Systems & Battery Backup Solutions





Long-lasting, efficient, and safe Modular DC Power Solutions

Reliable Backup Power for Critical Grid Operations

We provide 100% customisable DC power Conversion and storage solutions for teams working on power – mission critical applications and utility infrastructure.

But what we truly deliver for you is confidence. Confidence you can have the right solution in place on time. That you can collaborate with an experienced local team. And that today's solution will perform just as well for you tomorrow.

CAN I DO THIS?

It's the most common question we get asked by consultants and project managers, and the short answer is: **Yes, most likely.**

Whether your challenge is restricted space, a rugged environment or tight timeframes, there is a solution for you. And with a talented team, a wide range of industry-leading products, and the ability to design, manufacture and assemble in Australasia – we can make it happen.

Energy Efficient Modular Solutions you can Scale

You can have the best of all worlds with us. A solution you can fully customise and scale with ease. Our plug & play modular design system, allows you to integrate a wide range of leading-global products with components we manufacture in our own ISO9001 facility.

We always use the best components available based on features, cost and lead times.



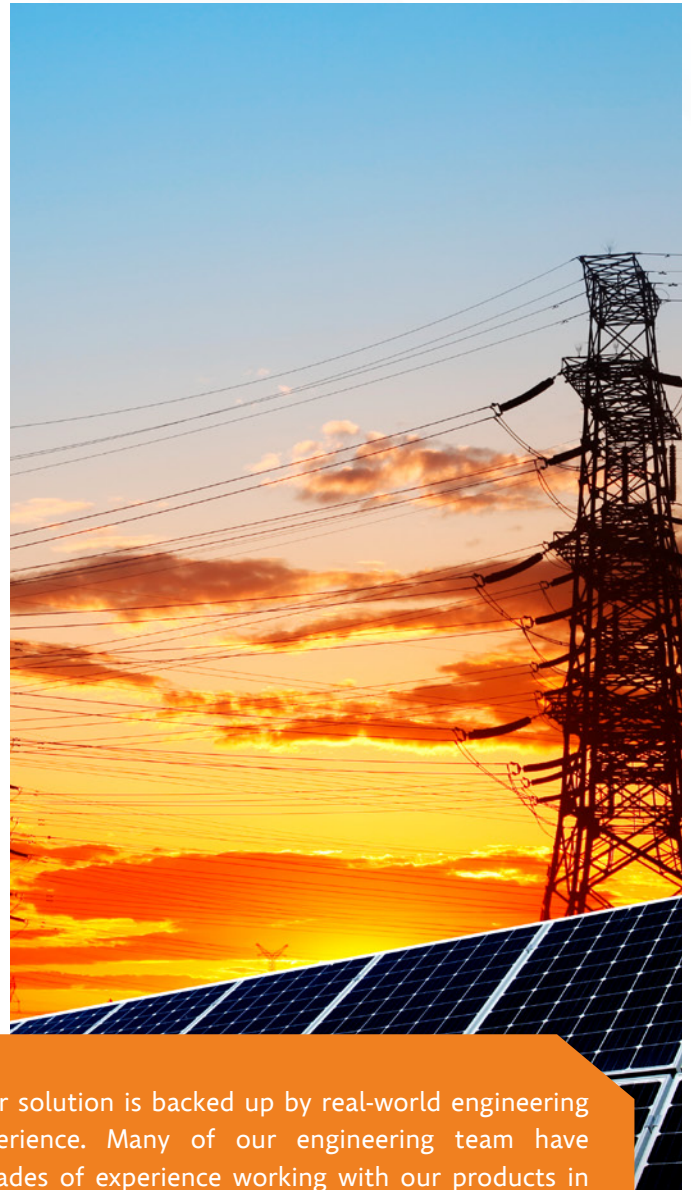
Capabilities that give you control

You have control over your entire project because we can design, manufacture, and assemble locally in New Zealand and Australia.

- Quality assurance – You can fully test quality and performance standards.
- Greater flexibility – You can tailor solutions and make ongoing modifications.
- Better lead-times – You can reduce lead times with shorter supply-chains.
- Ongoing support – You have easy-access to training, repair and service.
- In-deep documentation – Every system has a dedicated user manual with electrical and mechanical schematics and detailed instructions.

Switched on service that's there for you

Your solution is designed around you, not the components that go into it. We'll build a relationship with you from the start and add value in the ways that matter to you. We do site visits to understand your world better. We produce general assembly schematic designs at the quote stage, so you can make smart decisions. We keep collaborating on designs until you're 100% satisfied. And we're always there to provide ongoing support or to help with a maintenance programme or repairs



Your solution is backed up by real-world engineering experience. Many of our engineering team have decades of experience working with our products in your industry. So, whether it's a unique configuration or a special mounting that's causing you headaches, you can relax. We're already on to it. It's what we do every day.

Expertise you can rely on

HELIO  S

A track record you can trust

It can take years to assess how well your solution stands up. So it's good to know that we've been providing peace of mind to the power industry for more than 40 years. With 10,000 happy clients in more than 40 countries, you're in good hands.

Micro case-study

Context & Challenges

One of the mains electricity network providers require a dual output DC Power Systems for powering critical and non-critical loads in a new transmission substation in the far north of New Zealand.

- Limited space, wall mount solution is preferable
- Solutions must have batteries and breakers for main protection, batteries, and DC Loads
- High temperature operation
- Full N+N redundancy on the battery banks for each voltage

Solution

Helios designers and account manager came up with a custom fully redundant and compact 21U 5.5kW 110VDC & 1.2kW 24VDC wall mount DC Power System with external battery banks.



Applications

Transmission Substations

Zone Distribution Substations

Power Stations

Mobile Substations

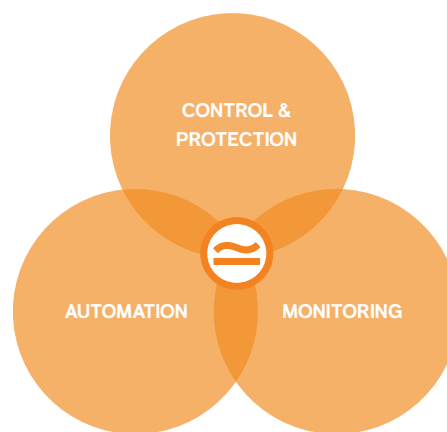
Collector Substations (wind & solar farms)

Industrial Manufacturing Plants

Repeater Sites

Low & Medium Voltage Paralleling

Switchgear Systems (PSG)



Auxiliary DC Power Systems

CRITICAL LOADS

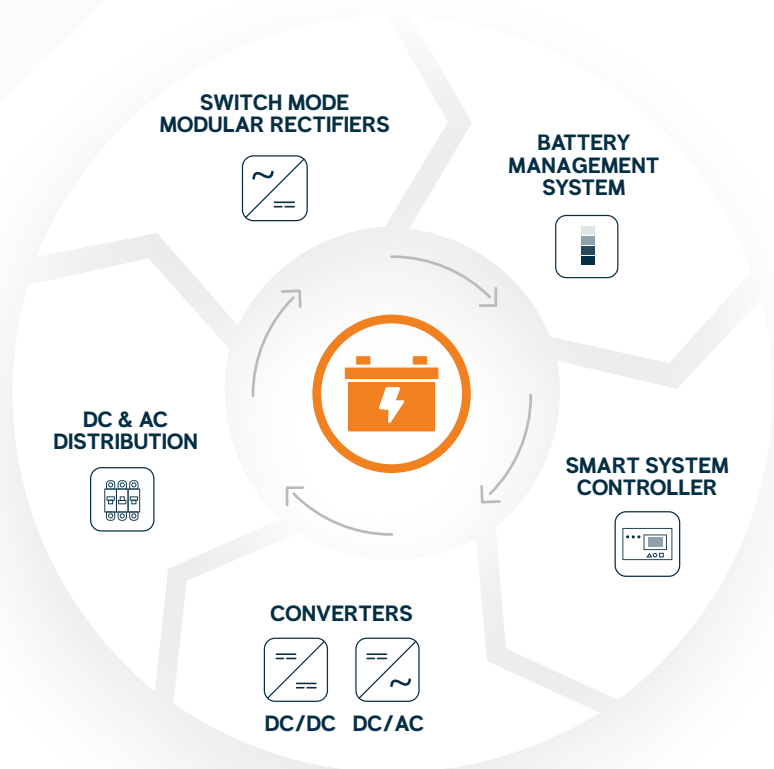
HV, MV & LV Circuit Breakers Tripping	SCADA	SWITCHGEAR	RELAYS	LOCAL MONITORING DEVICES	EMERGENCY LIGHTING
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HELIOS

Designing and building solutions with reliable and efficient components



16kW Multi-Output DC Power System with Battery Backup for an Oil & Gas production facility requiring different voltage levels



Switch Mode Modular Rectifiers

- Modular Switch Mode Rectifiers from 250W to 4000W
- 12V, 24V, 36V, 48V, 110V, 125V & 220VDC Output Options
- Natural Convection and fan-cooled rectifiers 230-415VAC (Single phase & Three phase input options)



DC & AC Distribution

- AC & DC Loads distribution, MCBs or MCCB when output current is higher than 125A can be integrated in our cabinets, wall or rack mount solutions
- Battery Connections, MCB or terminal for external battery fuse
- Optional fully managed DC loads over TCP/IP



DC/AC Sine Wave Inverters

- Modular Sine Wave Inverters with 24V, 48V, 60V, 110V, 125V & 220V nominal battery voltage
- Natural convection cooled or temp. compensated fan in inverters
- Can be combined with static transfer switch & manual bypass



DC/DC Converters

- Step down or Step up isolated DC/DC Converters with wide input voltage to avoid battery banks for each voltage
- Fan or natural convection cooled options



Smart Controllers

- Web interface, Ethernet TCP/IP SNMPv3 NTP, Modbus TCP/IP, , RS-232
- IEC 61850 SCADA compatibility
- User configurable alarm and settings



Batteries and Battery Management Systems

- Our systems are compatible with a various types of batteries such as Lead-acid, Lead-carbon, Ni-Cd & Lithium-ion
- BMS provides unlimited number of batteries, with hardware options targeting both large and small battery systems



UNITED ARAB EMIRATES

AUSTRALIA

SINGAPORE

NEW ZEALAND

World-class
engineering,
local focus.



Standard or Customised DC System Solutions
If we don't have it, we'll design it to match your requirements.

The Helios Power Solutions Group

Helios Power Solutions is a privately owned group of companies with businesses in Australia, New Zealand and South East Asia. Helios Group companies are specialists in the design, manufacture and distribution of conventional and renewable DC and AC power systems. The Helios Group is an ISO9001 registered company with manufacturing capability in both New Zealand and Australia. Helios Group companies have been supplying DC and AC Power solutions to all industrial sectors for over 40 years.