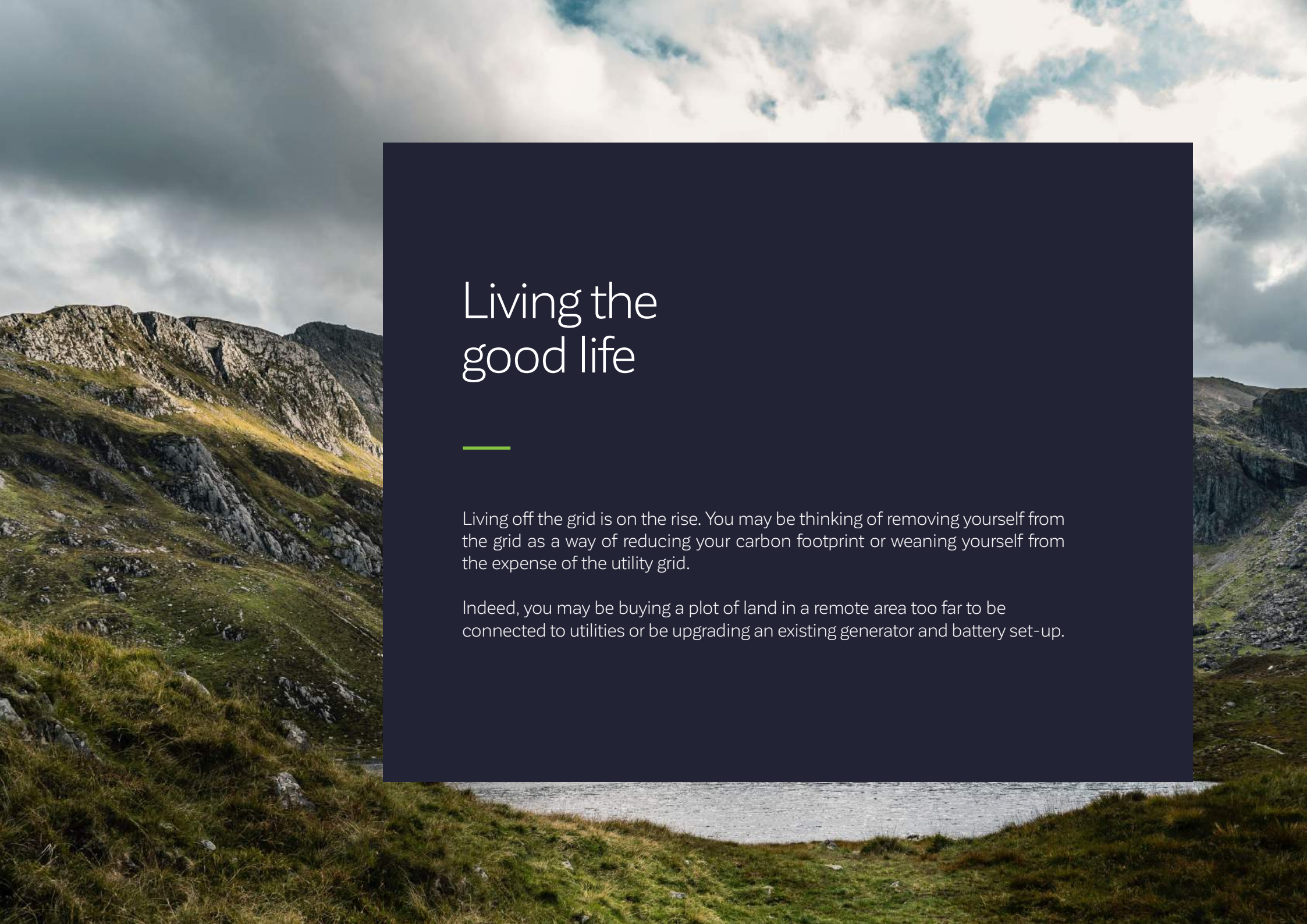
Solar Plants

ONLINE BROCHURE

The power of off-grid energy
Join the solar revolution



Living the good life

Living off the grid is on the rise. You may be thinking of removing yourself from the grid as a way of reducing your carbon footprint or weaning yourself from the expense of the utility grid.

Indeed, you may be buying a plot of land in a remote area too far to be connected to utilities or be upgrading an existing generator and battery set-up.

Designing an energy system for properties without an electrical connection requires detailed design and continuous assessment to ensure that you receive a constant, automated supply of seamless energy.

The speed of development of computer managed lithium-ion storage, coupled with advanced PV modules means that your home (and your sanity) is not ruined by a noisy, polluting diesel generator.

Our dedicated off-grid engineers can work with you to size and recommend a system to perfectly match the energy requirements of your property, future-proofed to ensure that scaling up a system when required (i.e. the purchase of an electric vehicle) is an easy process.

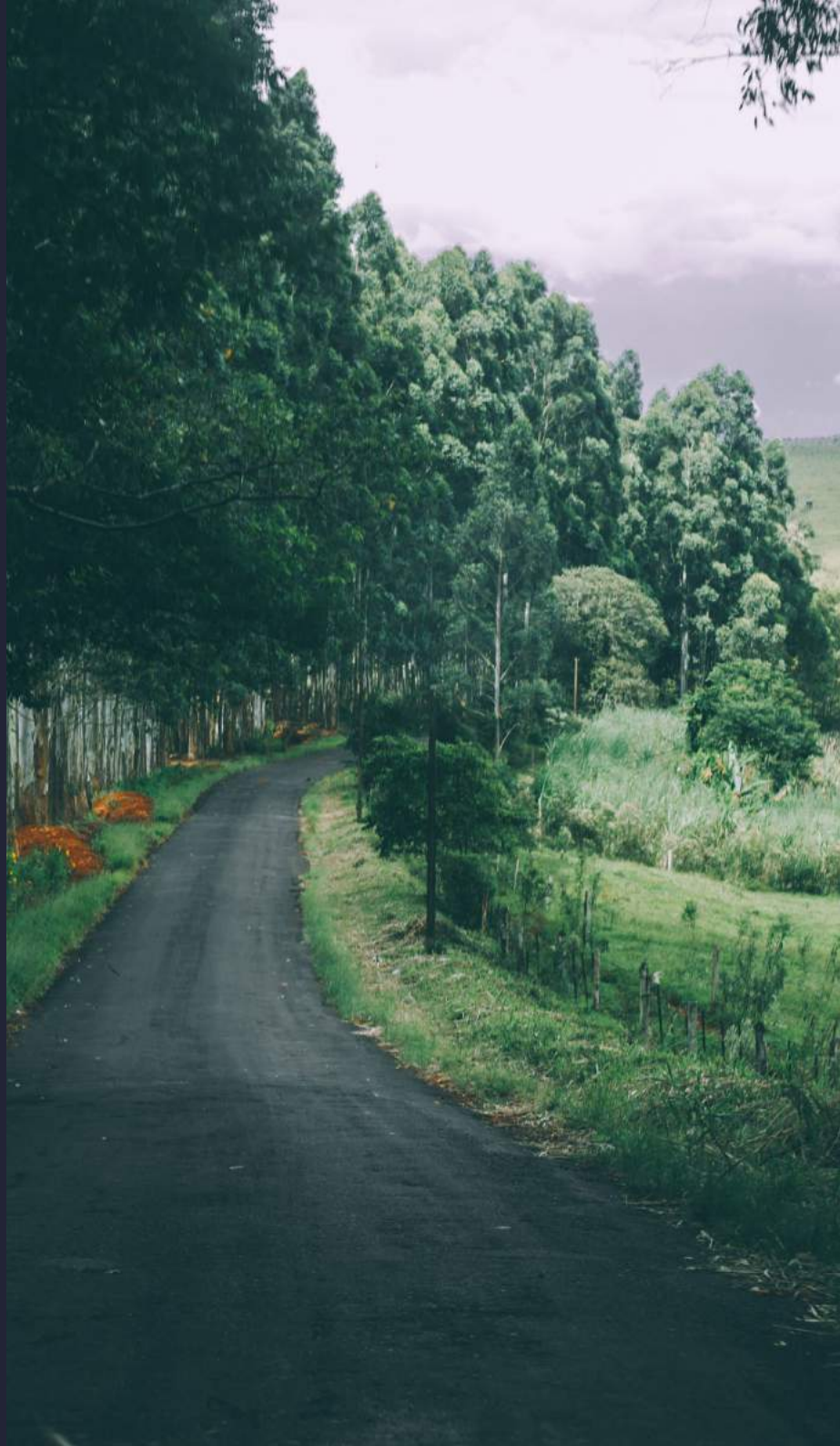
New to off-grid?

Cheaper than a grid connection

We have seen some shocking estimates of getting an electricity supply to a new or remote home, some as much as a six figure sum! The cost of an off-grid PV and storage system is nowhere near the cost of getting a grid connection.

Never again pay an electricity bill

No energy price hikes, no black-outs...you can enjoy complete energy freedom, future-proofing your home for the long term.



Upgrading an existing system?

Energy efficient

You will be replacing your dirty, inefficient diesel generator with a highly efficient and fully automated solar PV, storage or hybrid system – no more noise pollution or the inconvenience of switching on and off.

Energy freedom

Get freedom from fuel deliveries and the fluctuating prices of diesel, and relieve the worry about potentially running out.

For everyone

Doing your bit for the environment

With a solar and storage system, you can feel proud that you are reducing your carbon footprint and contributing to a more healthy world, reducing reliance on depleting and polluting fossil fuels.

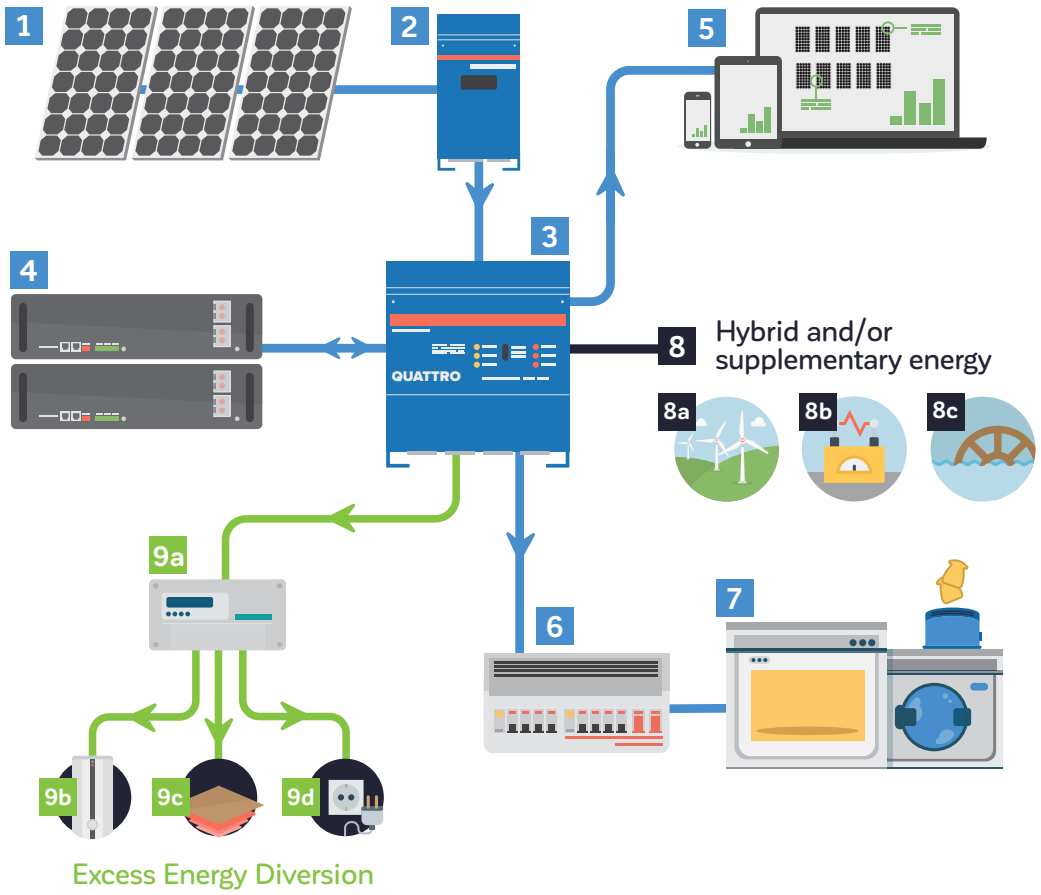
Real time monitoring

Always know the status of your system with online or app based monitoring, we install a unique wifi hub that gives you visibility of your complete system.

Ongoing adjustments

As time progresses, our engineers remotely adjust algorithms and settings as your home starts to use and record energy use patterns. This will ensure that PV and storage energy is maximised, and that any generator back up is kept to a minimum.

How it works



Basic system

1 Solar panels convert the sun's energy into DC electricity.

2 A Solar Charge Controller (SCC) will regulate the flow of this energy.

3 The inverter/switching device/ charger is the brains of the system and does the hard work of managing the charging and discharging of the battery. It also converts the DC energy to AC when required by the property.

4 A modular battery storage system allows for future system expansion.

5 A monitor displays detailed reporting on generation, usage and storage. It will also communicate via WIFI to a portal that both the homeowner and Solar Plants will have access to. Diagnostic alerts to our engineers will allow us to troubleshoot remotely.

6 Consumer board.

7 Appliances.

8 Hybrid system

8a Wind turbine: increases renewable energy generation.

8b Diesel generator: can be used to cover the demand of extra loads.

8c Water turbine: increases renewable energy generation.

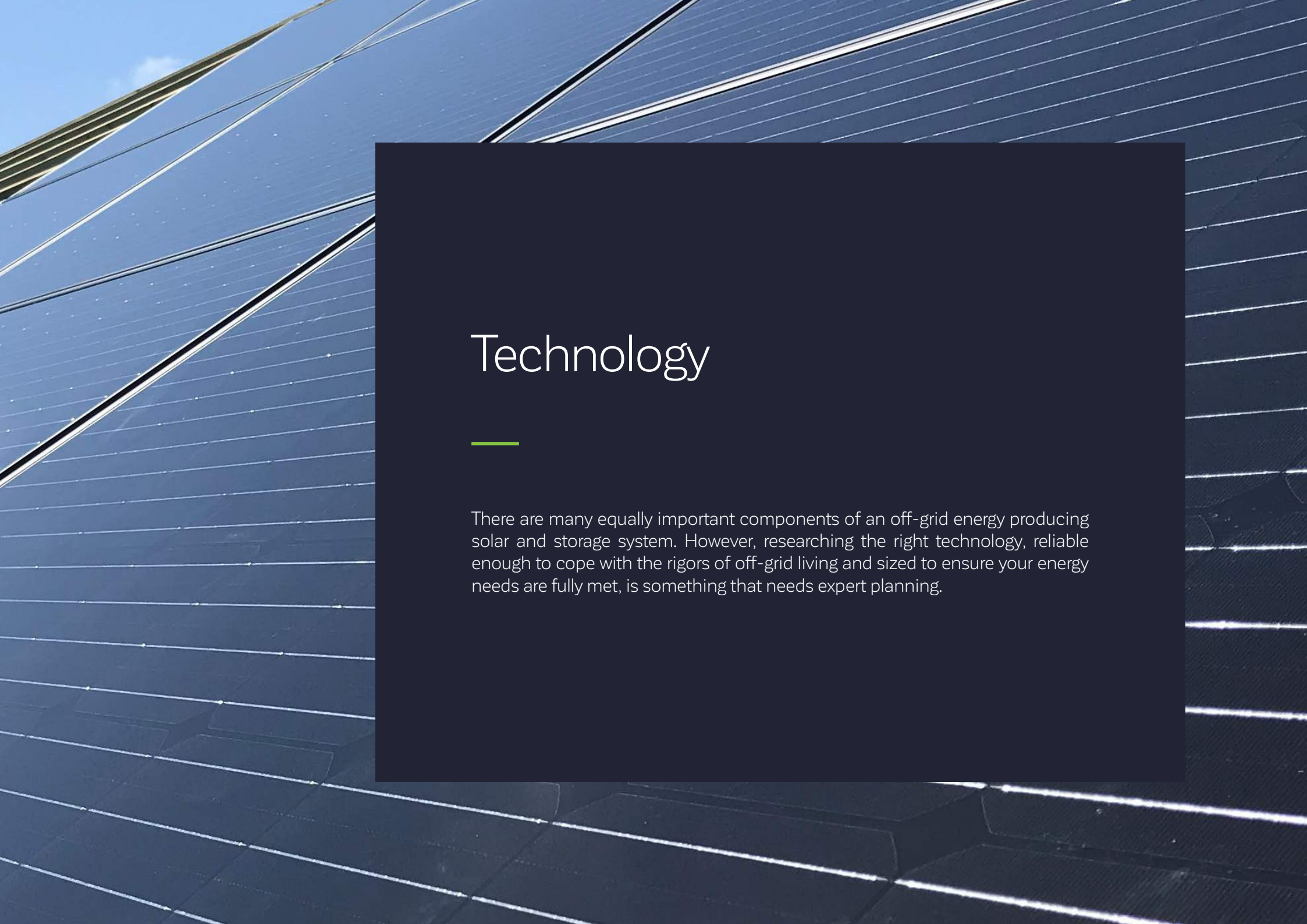
9 Excess energy diversion

9a A diverter switch manages the usage of excess generation.

9b If the property has an immersion tank the excess energy can be diverted to heat water.

9c If there is underfloor heating any excess energy can be diverted to switch it on.

9d An EV charging point can be added.



Technology

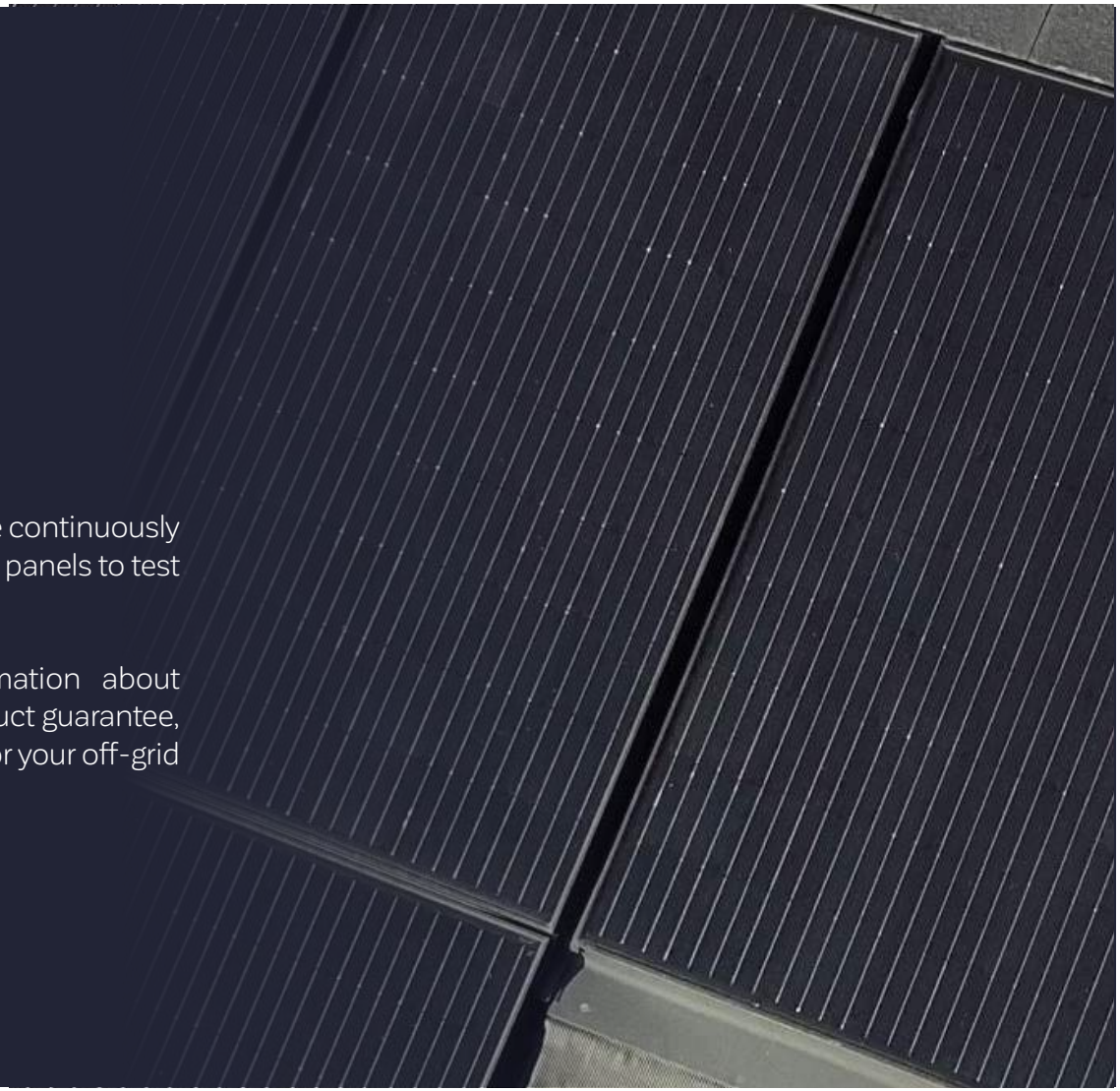
There are many equally important components of an off-grid energy producing solar and storage system. However, researching the right technology, reliable enough to cope with the rigors of off-grid living and sized to ensure your energy needs are fully met, is something that needs expert planning.

TECHNOLOGY

PV panels

All panels are not the same! At our test rig in Bristol we continuously monitor the performance of some of the UKs leading panels to test their durability in our local climate.

We use this data along with supporting information about performance warranties, origin of manufacture, product guarantee, along with cost to help recommend the best panels for your off-grid solar installation.



TECHNOLOGY

Battery storage

There are many types of off-grid batteries available, from cheap and cheerful lead acid batteries, eco-friendly salt water batteries and lithium-ion technology, to name a few.

Whilst historically lead acid was the main storage technology available, off-grid energy technology has become more intelligent and increasingly automated, and now works better with lithium-ion battery technology.

Lithium-ion has a high C rating which means it is fast to charge and discharge, plus you can use 100% of the battery's stated capacity (you cannot fully discharge a lead acid battery).

In addition, lithium batteries cope with larger loads, last longer in terms of the amount of cycles, are smaller and lighter, and quite frankly, look better!

TECHNOLOGY

Charge controller

A robust solar PV charge controller is required for DC coupled off-grid systems, ensuring maximum energy is drawn from your solar panels using Maximum Power Point Tracking (MPPT) and to regulate the flow of PV energy to the inverter/charger when there is over production.

Again we use charge controllers that have a VRW online portal that integrates data with the monitoring portal for full visibility of PV production.

TECHNOLOGY

DC inverter/charger

Automated and intelligent, this is the hardest working part of an off-grid solar battery/storage system.

Responsible not only for managing the inversion process for the different sources of energy (PV panels, storage, back-up generator, hydro, wind etc), the inverter/charger also manages the flow of energy to ensure a balance between battery charging and loads.

Our off-grid team recommend leading technology that comes with remote monitoring and control, enabling full visibility via a smartphone, tablet or computer to monitor the status of your system. As installers we can remotely make adjustments to the automated functions as your lifestyle habits change, or trouble shoot if there is ever an issue.

TECHNOLOGY

Off-grid AC inverter

If your off-grid PV system is AC Coupled, then a robust inverter with monitoring capabilities is recommended. We only ever choose long-established leading inverter brands, proven high efficiency with a long warranty that reflects the reassurance the manufacturer has in its technology.

The monitoring will always allow us, and you, know that everything is functioning to its maximum ability.

Calculating

Our off-grid engineers are industry leading experts with unrivaled experience of installing solar and storage off-grid technology. The team are supported by in-house roofers and electricians to ensure a quality installation at all levels.

Lead engineer, Ian, will design a solar PV or a renewable energy hybrid system matched to your energy needs, and will:

- Advise on the PV options currently available
- Accurately size and design a system for you based on your energy requirements
- Secure preferential deals on the latest technology
- Project manage and support the installation of your system

Lead engineer, Ian Hewson

Why Solar Plants?

Solar Plants is an award winning, national installer of solar PV and storage technology. Over 8,000 customers across the UK have put their trust in us, read more to find out why.

WHY SOLAR PLANTS?

Test rigs

Our energy advisers understand that researching the best renewable technologies can be a bit of a minefield! Solar Plants is the only installer that has invested in both a panel and inverter test rig, continuously monitoring the performance of the technology that we recommend, so that you don't have to.

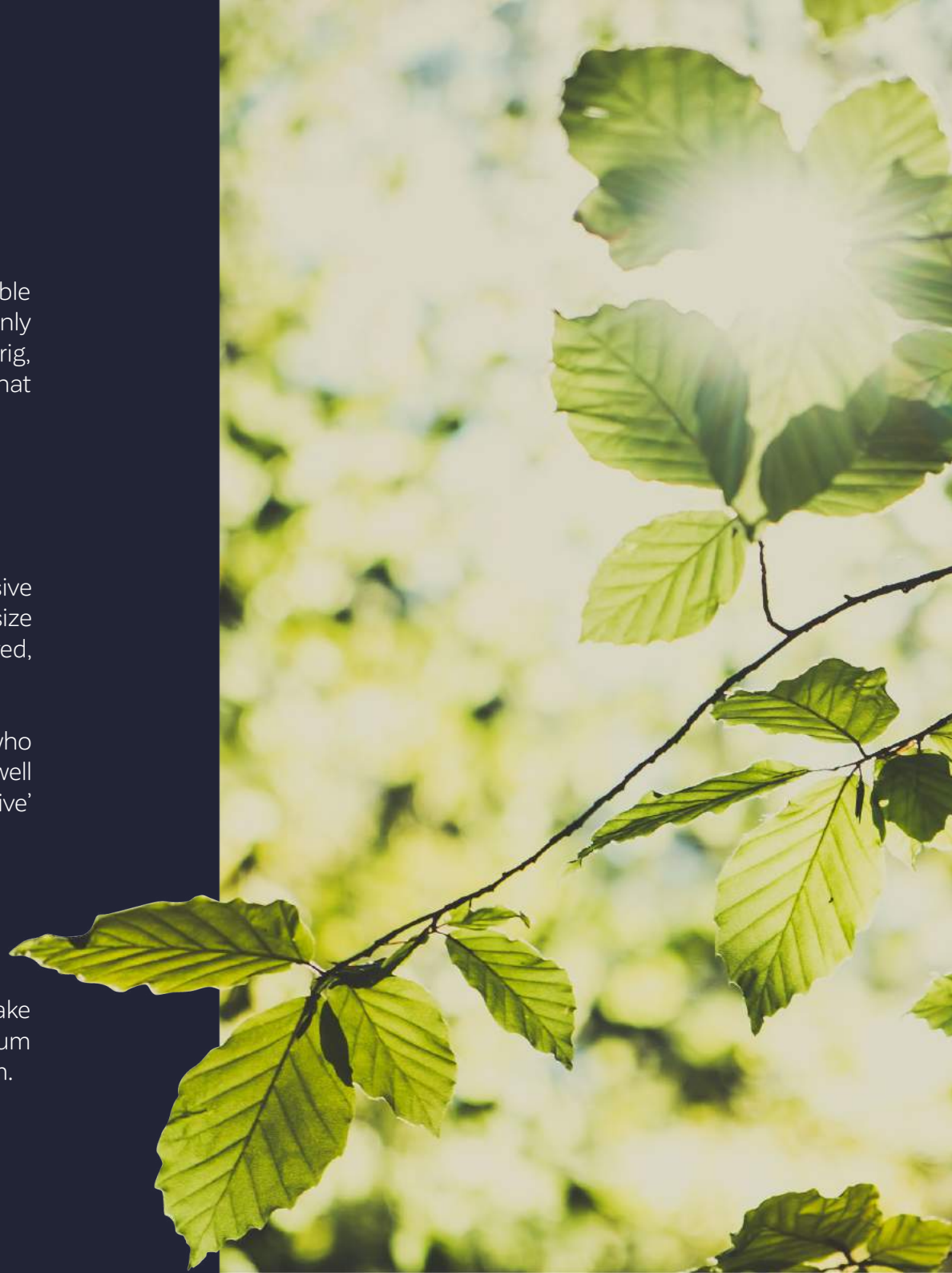
Dedicated departments

Our dedicated off-grid department will bring you their extensive knowledge of the technology and will be able to accurately size and install a system that will provide you with a fully automated, seamless supply of clean, green energy.

The team is headed by qualified electrician, Ian Hewson, who has been designing off-grid systems for over 20 years. Ian is well known within the industry and helped design the UK's first 'active' classroom at Swansea University.

Expert monitoring

Once installed, our off-grid team will remotely monitor and make adjustments to your system ensuring it is working to its maximum efficiency and that back-up generator time is kept to a minimum.



Certified and qualified

We have gone the extra mile to ensure that we have the right accreditations and financial backing to ensure that the design and installation of your system is carried out professionally and safely.

We are HIES registered, meaning that we have undergone an in-depth assessment into achieving a level of professional standard and deliver customer satisfaction. In addition, HIES provide both a deposit protection service and full 10-year comprehensive workmanship warranty.

We are also MCS and Napit Certified. MCS guarantees that our company and products have conformed to a rigorous set of standards.

APPROVED INSTALLER

hies Accredited Member

MCS

NAPIT

The leading solar PV installer on Trustpilot, and a Which? Trusted trader

Over the years our customers have been doing a lot of the hard work for us, talking to their friends and family about the benefits of solar. Indeed, over one third of our work comes from personal recommendation.

For those that don't know us, we decided to 'bare all' by registering on Trustpilot, the UK's leading independent review website, encouraging our customers to leave a review for all to see. We are currently ranked number one in the solar installers category with a score of 9.4 out of 10.

More recently we were audited by Which? and after stringent tests were accepted as a Which? Trusted Trader.

Trustpilot

Fantastic off-grid installation – one month on. The Solar Plants off-grid manager was brilliant in his communication. I would give the installation manager 5 stars for the great professional job, friendly attitude, knowledge, and skill. I will end with stating that I have recommended the company to friends, one is putting in an order.

Enyon ✓ *Verified Customer*

★★★★★

Award winning customer service

As we have grown, our emphasis has been on providing a best-in-class customer experience through every stage of a customer journey.

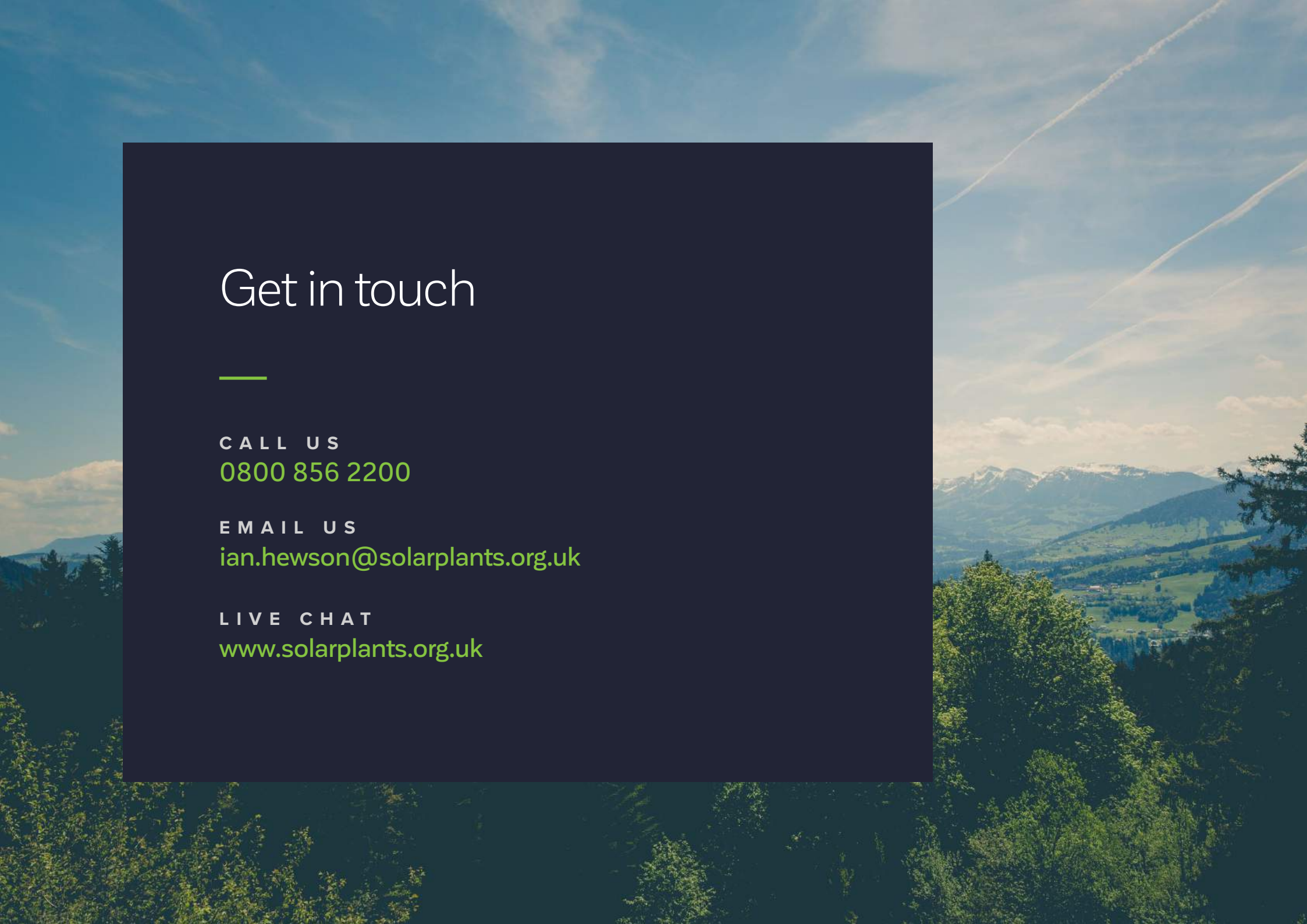
Last year we won first place at the UK Customer Experience Awards for Best Customer Centric Organisation.

CXA'18
UK Customer Experience Awards
GOLD AWARD

Finance options

Through Shawbrook Bank, we offer a number of flexible payment options to allow customers to spread the cost of an installation.

We have been authorised through the Financial Conduct Authority to offer a selection of products after being assessed on our business plans, risks, budgets, resources, systems, controls and the skills and knowledge of our staff to offer these products.



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