Smart energy and storage company directory

2nd edition
Welcome to the latest edition of the Regen smart energy and storage company directory.

This directory covers a range of organisations providing products and services in the smart energy and storage sectors across the UK.

We hope the directory is a valuable resource for people working in this emerging sector and we will update the directory as the sector develops. If you would like to feature in the directory, opportunities are available for a free listing or to further showcase your work with a premium feature. Regen members are highlighted in green throughout the directory.

Our apologies if we have missed your company off the directory, please get in touch if you would like to be included in future editions.

To find out more about Regen’s smart energy and storage work, please contact Tamar Bourne or Ray Arrell on 01392 494399.

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As our electricity grid has become more constrained, the need for smart solutions has increased and the opportunities for this sector continue to grow.

The purpose of this directory is to help those investing in smart energy solutions to identify UK companies to work with, to raise the profile of the smart and storage sectors and to monitor growth on an annual basis.

The UK is uniquely placed to be a market leader in smart systems and energy storage. The UK already has an established position as a world leader in data analytics and software development. And we have seen the number of companies listed in this directory increase from approximately 150 to 330 in just the last 12 months.

These capabilities are essential for the active management of the emerging flexible energy system.

With a significant amount of traditional energy supply set to close over the next few years, successful integration of distributed generation using smart and storage capabilities will help secure our future national energy supply.

**Introduction**

This directory breaks the smart energy sector into seven key categories:

- Smart grid infrastructure
- Advance Meter Infrastructure
- Research capabilities
- Smart distributed generation integration
- Energy storage
- Demand side response
- Consultancy services

These categories cover a range of technologies and services that create a more flexible and responsive energy system, improving energy efficiency across the network from producer to end-user.

Each category within the directory is divided into subgroups which describe the main products and services offered by the company.

**Smart grid infrastructure**

Developing smarter grid infrastructure is essential for the creation of intelligent, responsive and automated power grids, which can be controlled flexibly with real time information between power generators and network operators.

Sensor installations are already integrating a layer of network communication that enable network operators to monitor and control the grid in near real time and detect faults early.

As a result of these developments, grid infrastructure can be optimised and outages can be significantly reduced, for example through Active Network Management (ANM).

**Infrastructure design**

- PowerSystems UK Bristol
- Balfour Beatty London
- Fundamentals Swindon

**Infrastructure operations**

- GMC-I PROSyS Ltd Lancashire
- Oracle Reading

**Monitoring/data management**

- eMS Lisburn, Northern Ireland
- Hitachi Maidenhead
- Huawei Reading
- Itron UK Suffolk
- Outram Research West Sussex
- Samsung Various
- Smarter Grid Solutions Glasgow

**Network communications**

- Cisco Systems Middlesex
- Network Communications Eaton
- GE Digital Energy Newcastle
- IBM Portsmouth
- Intel Swindon
- Power Plus Communications London
- Smart Grid Networks Huddersfield
- Tollgrade Communications Bracknell

**Regen SW Member Organisations**
Advance Meter Infrastructure (AMI) is an integrated system of smart meters, communication networks and data management systems.

Smart meters are a key element, providing information to customers on their consumption as well as data to the network operators and suppliers, subsequently improving the accuracy of bills.

The data and functionality that comes from a smart meter has the potential to enable energy consumers to have greater control over how and when they use power. For example through ‘time of use tariffs’ and smart appliances.

### Network operators

<table>
<thead>
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<th>Transmission/distribution</th>
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<td>CG Global Stockport</td>
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<td>Eaton Manchester</td>
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<td>Elimpus Glasgow</td>
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<td>Ensto Leeds</td>
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<td>Kelvatek Lisburn, Northern Ireland</td>
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<td>Netcontrol Cheshire</td>
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<td>NOJA Power Cheshire</td>
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<td>Ormazabal Liverpool</td>
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<td>Prysmian Hampshire</td>
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<tr>
<td>Schneider Electric Ltd London</td>
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<td>TNEI Manchester</td>
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<table>
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<th>Manufacturers/installers</th>
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<tr>
<td>Clean Energy Prospector Bristol</td>
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<tr>
<td>Solar South West Crewkerne</td>
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<td>Arbarr County Derry</td>
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<tr>
<td>EDMI Europe Ltd Newcastle</td>
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<td>EM-lite Peterborough</td>
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<tr>
<td>Energy Assets Livingston</td>
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<tr>
<td>Ericsson Guildford</td>
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<tr>
<td>Iskraemeco UK Cambridge</td>
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<tr>
<td>Landis+Gyr Peterborough</td>
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<td>Macquarie Energy Leasing London</td>
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<td>Samsung Various</td>
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<td>Scotts Belfast</td>
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<tr>
<td>Secure Meters Bristol</td>
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<td>Siemens Nottingham</td>
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<td>ST-Microelectronics Bristol</td>
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<td>Syこう Leeds</td>
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<td>Toshiba Weybridge</td>
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Case study: Sunshine Tariff

Sunshine Tariff

Regen, working with Western Power Distribution (WPD), Wadebridge Renewable Energy Network (WREN) and Tempus Energy trialled a Sunshine Tariff in Wadebridge, Cornwall.

The trial looked to understand how different customers engage with a cheaper daytime tariff and how active they become in changing their consumption patterns in response to this price signal. The project aimed to resolve network capacity issues in the local area by incentivising customers to use electricity between 10am and 4pm in the summer months, which is often when solar generation is at its greatest.

To find out more about this trial please visit www.regensw.co.uk/sunshine-tariff
Institutions across the country are supporting the innovation and growth in the smart energy sector.

### Academic organisations

<table>
<thead>
<tr>
<th>University of Exeter</th>
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<tbody>
<tr>
<td>Centre for Advanced Sustainable Energy Northern Ireland</td>
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<tr>
<td>Cranfield University</td>
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<tr>
<td>Heriot Watt University</td>
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<td>HubNet Universities across England</td>
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<tr>
<td>Imperial College London</td>
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<td>Power Network Demonstration Centre Cumbernauld</td>
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<td>Swansea University</td>
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<td>Ulster University Centre for Sustainable Technologies Ulster</td>
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<td>University of Aberdeen</td>
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<td>University of Bath</td>
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<td>University of Edinburgh</td>
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<td>University of Newcastle</td>
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<tr>
<td>University of Sheffield (Sheffield Solar)</td>
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<td>University of Southampton</td>
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<td>University of Warwick</td>
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**Research organisations**

- Exeter City Futures Exeter
- BRE Cornwall
- Bristol Is Open Bristol
- Centre for Doctoral Training in Energy Storage and its Applications (Sheffield Uni)
- Navigant Research London
- Regen Exeter
- UK energy storage consortium London

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Swanbarton specialises in smart energy storage - the future of electricity right across the globe. We have been shaping the landscape of smart electricity networks and storage for more than a decade.

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Smart distributed generation integration

Smart distributed generation (DG) integration allows electricity networks to integrate renewable and low carbon energy supplies more efficiently.

There are many types and sizes of DG, including anaerobic digestion, onshore wind, solar PV and solar thermal, hydroelectric power and Combined Heat and Power (CHP) among other generation technologies.

Smart technologies and services can be used to help integrate DG in constrained areas of the network. For example, through use of export limiting technologies.

### Virtual Power Plants (VPP)
- RWE Swindon
- Limejump London
- Neas Energy Burnham
- Open Utility London
- Solo Energy Edinburgh
- Statkraft London
- Upside Energy Ltd London

### Microgrids
- G2 Energy Buckinghamshire
- Dong Energy London
- Siemens Chippenham

### Export limiting technology
- Argand Solutions Totnes
- Bristol BlueGreen Bristol
- Solar Edge Technologies London
We solve complex energy problems...

The energy storage market is made up of several core technologies:

- Primary storage, which involves superconducting and capacitor technologies
- Mechanical storage, which includes pumped hydro, compressed air and flywheels
- Electrochemical storage, which relates to batteries such as Lithium-ion
- Thermal energy storage, which captures heat to create energy on demand
- Electric vehicles, sometimes referred to as distributed storage.

These technologies are continuing to develop as the sector expands. In addition to storage there are enabling technologies such as power conversion systems, software and controls. The energy storage market continues to advance rapidly with improvements in affordability, application and efficiency.

The benefits storage can offer the smart grid include:

- Capacity support
- End user peak shaving
- Frequency response
- Arbitrage
- Minimising curtailment.

Energy storage project development companies

<table>
<thead>
<tr>
<th>Company</th>
<th>Location</th>
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<tbody>
<tr>
<td>AES UK &amp; Ireland</td>
<td>Ireland</td>
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<tr>
<td>British Solar Renewables</td>
<td>Glastonbury</td>
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<td>Uniper Technologies Ltd</td>
<td>Nottingham</td>
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<td>Anesco</td>
<td>Reading</td>
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<td>belectric</td>
<td>Buckinghamshire</td>
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<td>Centrica</td>
<td>Windor</td>
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<td>EnerNOC</td>
<td>London</td>
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<td>Flexitricity</td>
<td>Edinburgh</td>
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<td>Green Hedge Group</td>
<td>London</td>
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<td>KiWI Power</td>
<td>London</td>
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<td>Limejump</td>
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<td>Open Energi</td>
<td>London</td>
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<td>RES Group</td>
<td>Hertfordshire</td>
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<td>UK Power Reserve</td>
<td>Solihull</td>
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<tr>
<td>Upside Energy</td>
<td>Cheshire</td>
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On the left is an image of a Romanesco type broccoli, a vegetable high in vitamin C, B vitamins, and fiber. For more information on companies, visit www.regensw.co.uk/directory.
For information on companies go to: www.regensw.co.uk/directory

**EV charging point infrastructure**
- Ecoelectrical Limited Gloucestershire
- ICU Charging Equipment Bristol
- Prolectric Services Ltd Weston Super Mare
- V2G Limited Exeter
- Alfen ICU Charging Equipment Bristol
- EV Motion Barnstaple
- Next Green Car Bristol
- Pod-Point London
- Poweri Services Ltd Nottingham

**Storage companies**
- Doosan Babcock Renfrew
- G2 Energy Buckinghamshire
- Lightsource Renewable Energy London
- Solar South West Ltd Crewkerne
- ABB Warrington
- Ads Tech Germany
- CCL Components Glasgow
- Circuitree Brighton
- Edmundson Electrical Greentech Cheshire
- Locogen Edinburgh
- Off Grid Energy Ltd Rugby
- Origami Energy London
- Parker Hannifin Littlehampton
- Smart Power Systems Somerset
- Solarsense UK Ltd Somerset

**Electrochemical - flow state**
- Cellnexx Energy Limited Scunthorpe
- C-Tech Innovation Chester
- Gildemeister Energy Solutions
- Johnson Matthey Fuel Cells Swindon
- REDT Energy Storage Wokingham

**Electrochemical - solid state**
- Delta Electronics Europe East Kilbride
- Powervault London
- SunGift Energy Exeter
- Wattstor Energy Storage Systems Cornwall
- Alevo Various distributors
- BayWa London
- BYD Various distributors
- ChargeSync London
- Solid Power Systems Somerset
- Storelectric Ltd London
- Cumulus Energy Storage South Yorkshire

**Multiple technologies**
- Green Acorn Penryn
- Gaelectric Belfast

**Mechanical**
- Highview Power Slough
- Isentropic Ltd Hampshire
- Quarry Battery Company Limited London
- Storelectric Ltd London

**Thermal**
- Minus 7 Isle of Wight
- Sunamp East Lothian, Scotland
- ICAX London

**Chemical**
- ITM Power London
- Kiwa GASTEC Cheltenham

**EV charging point infrastructure**
- Fronius UK Milton Keynes
- GBSL Bath
- Hoppecke Industrial Batteries Newcastle-under-Lyme
- Immersa Ltd London
- NEC Energy Solutions London
- S&C Electric Company Swansea
- Saft Various distributors
- SMA Milton Keynes
- Solar PV Partners Winchester
- Solo Energy Edinburgh
- Sonnen Wildpoldsried, Germany
- Tesvolt Germany
- Varta Storage Various distributors
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Demand Side Response (DSR)

Demand Side Response (DSR) is an important element of a smart grid that allows consumers to make informed decisions about their energy consumption. The benefits of DSR include cutting costs for energy users and helping utilities to operate more efficiently.

The procurer of a DSR service (e.g. network operator, supplier) also has greater control as real time network management enables anticipation of consumption and adaptation of supply.

There are a range of energy management systems which enable control of consumption by the end-user, including Home Energy Management Systems and Energy Management Systems for commercial users. The uptake of these types of systems is increasing and will continue to as the roll out of DSR and smarter grid usage continues.

### Commercial Energy Management Systems (EMS)

- Argand Solutions Ltd, Totnes, Devon
- Solar South West Ltd, Crewkerne
- Advantage Utilities, Weybridge
- Aimteq Solutions, Swindon
- Ameresco, London
- BEST (British Energy Saving Technology), St Austell
- Energy Pool, St Albans
- EnerNOC, London
- Flexitricity, Edinburgh
- Fujitsu, London
- Open Energy, London
- Origami Energy, London
- Passiv Systems, Berkshire
- Pearlstone Energy Ltd, London
- Power Oasis, Swindon
- Reactive Technologies, Oxford
- REstore, London
- Silver Spring Networks, London
- Smartest Energy, London
- Solar Ready, Berkshire
- Toshiba, London

### Home Energy Management Systems (HEMS)

- Apple
- Aston Reef, Cornwall
- British Gas, Windsor
- British Gas (Hive), Windsor
- CGI, Bristol
- Cornwall Smart Homes, Truro
- Energenie, Harlow
- Enmodus, Chepstow

### Aggregators

- Centrica, Windsor
- Energy Trading Ireland, Belfast
- EnerNOC, London
- Flexitricity, Edinburgh
- KiWi Power, London
- Limejump, London
- Open Energy, London
- UK Power Reserve, Solihull
- Upside Energy, Cheshire

### Other Services

- Green Energy Options, Cambridge
- Google - Nest, Various distributors
- Guru Running, Bristol
- Honeywell Control Systems, Bracknell
- Kernow Controls, Penryn
- Logitech, Windsor
- Navetas Energy Management, Woodbridge
- Panasonic, Berkshire
- Xsilon, Royal Wootton Bassett

For information on companies go to: www.regensw.co.uk/directory
There are a variety of consultancy firms enabling progress in the smart and storage sectors, offering support across a range of industries, including engineering, software, project management and legal services.

### Multidisciplinary consultancy

- **Black & Veatch Ltd Exeter**
- **Cornwall Energy Norwich**
- **EA Technology Chester**
- **Element Energy Cambridge**
- **Eunomia Research & Consulting Bristol**
- **Everoze Bristol**
- **Evolve Analytics Hertfordshire**
- **Frazer-Nash Consultancy Plymouth**
- **LHW Partnership LLP Leighton Buzzard**
- **Mott MacDonald London**
- **OST Energy Brighton**
- **Pöyry Energy Plymouth**
- **Ricardo - AEA London**
- **SLR Consulting Ltd Bristol**
- **Smarter Grid Solutions Glasgow**
- **Sustainability First London**
- **Swanbarton Energy Storage Consultants Wiltshire**
- **Verco Corsham**
- **Ward Williams Associates, iWWA Truro**
- **WSP PB Exeter**

### Stakeholder and industry groups

- **Electricity Storage Network Wiltshire**
- **Invest Northern Ireland Belfast**
- **Renewable Energy Association London**
- **Solar Trade Association London**
- **Association of Meter Operators London**
- **British Photovoltaic Association London**
- **RenewableUK London**
- **Smart Energy GB London**
- **SmarterUK London**
- **Solar Media Ltd - Energy Storage 100 London**
- **Sustainable Energy Association Solihull**

### Software, communications and data services

- **CGI Bristol**
- **EA Technology Chester**
- **Evolv Analytics Borehamwood**
- **Oracle Bristol**
We invest in sustainable energy projects

As a leading name in sustainable energy investment, we select and invest carefully in a wide variety of sustainable energy projects that will improve the UK’s energy mix. Through first-hand experience, we have a deep understanding of sustainable energy and can tailor our investment approach to meet the requirements of each new project.

Our investment criteria at a glance:

- **Proven technologies**
  - onshore wind, solar, heat, storage, energy efficiency

- **Typical investment size** from £0.5m to £20m
  - for communities and developers

- **Flexible approach to equity transactions**
  - acquisitions, co-investments, mezzanine debt financing

- **A financial investment with environmental, social, community impact**

Responsible, ethical, sustainable investment

We’re always looking to expand our portfolio. So if you have a sustainable energy project of commercial scale to take forward, and are seeking capital, we’d like to hear from you.

Get in touch by email info@thriverenewables.co.uk or call us on 0117 428 1850.

Sign up to our newsletter and get updates on our projects and capital raises at www.thriverenewables.co.uk
Membership with Regen

Regen membership is an extremely effective way of gaining high-quality market and policy insights. We help facilitate the development of your profile and connections as the transition to a smart, decentralised energy system, based on renewables, gathers pace.

We keep you informed

» Regular bulletins and policy updates and access to our expert team provide cutting edge insights into the latest changes in your sector so you can plan your business.

» Industry-leading policy and networking events where delegates gain insight, engage with policy makers and network with potential partners and customers. Our forthcoming events are listed here: www.regensw.co.uk/events-overview

» Opportunities to engage in our influencing and policy work and contribute to thought leadership papers and consultation responses: input from our members helps us set the tone for the right policy for the industry.

We keep you connected

» Listed online as a Regen member, this is a frequently used resource and encourages business relationships between the membership.

» Reach industry talent by posting your job vacancies on our networks and website for free.

» Opportunities to submit case studies for your company in different sector or project areas that we profile in our publications, showcase on social media and our website.

» Access to our Entrepreneurial Women in Renewables Network.

» Use of Regen SW Members’logo.

» Free use of the Engine Shed Business Lounge providing office working space in Bristol.

More details can be found online: http://www.regensw.co.uk/membership

Events

Attending our events is a key way of staying plugged into what's happening in your sector. Our forthcoming events are listed here: http://www.regensw.co.uk/Pages/Events/Category/key-events

Joining

Membership costs £840+VAT annually, or £295+VAT to small businesses (less than £1 million annual turnover) based in the south west. For more details, visit: www.regensw.co.uk/benefits

You can sign up online, or contact Rachel on rhayes@regensw.co.uk or 01392 494399

The smart energy and storage supply chain directory is managed by Regen. Addition of a new company to the directory is free, subject to the company developing relevant work in either the smart or storage sectors.

If your business would like to join the directory, or requires help in sourcing products or services within the smart energy and storage supply chain, please contact Tamar Bourne (smart energy lead) or Ray Arrell (storage lead) on 01392 494399.

Our thanks to the following companies for use of images: AES Energy Storage, British Solar Renewables, Powervault, Solar South West, UK Power Networks, Western Power Distribution.