



Battery Storage Solutions

# Optimise Your Energy Performance



- Reduce Energy Costs
- Enhance Sustainability
- Secure Your Power
- Reduce Scope 2 CO<sub>2</sub> Emissions

## Powering the Future with Behind-the-Meter Energy Storage Solutions

### Who We Are

Dale Power Solutions (DPS) is a trusted leader in the power industry, delivering cutting-edge energy solutions for over 90 years. We model, design and project manage the installation of Battery Energy Storage Systems (BESS), Uninterruptible Power Supplies (UPS), Backup Generators, in addition to full lifecycle Service and Maintenance across a range of sectors.

### Our Expertise

With extensive engineering capability and 85+ engineers across the UK, DPS is your complete backup power partner. Our BESS solutions help businesses reduce energy costs, increase power resilience, and meet their sustainability targets.

## What is Behind-the-Meter Energy Storage?

Behind-the-meter BESS refers to systems installed on-site at a business or industrial facility on the consumer's side of the electricity meter. They optimise energy use by storing electricity for later use, reducing reliance on the grid during periods of peak demand, and provide backup power in case of outages.

## Why it Matters?

Energy storage allows businesses to:

- ③ Reduce electricity costs by up to 40% with optimisations such as peak shaving.
- ③ Improve energy security by providing backup power.
- ③ Achieve sustainability goals and integrate with renewable sources for even better carbon savings.
- ③ Benefit from demand response and other grid services.



**1935**  
Delivering excellence since



**85+**  
Dedicated service engineers



**153,500**  
Maintenance hours per year



**24/7**  
Round the clock protection



**10,000+**  
Assets serviced annually



**4-hour**  
Nationwide response



# Why Choose us for Your Energy Storage Needs?

At Dale Power Solutions, we pride ourselves on providing a comprehensive, turnkey solution that supports you every step of the way in your energy storage journey.



## Our Process

### 1. Initial Consultation

We begin by understanding your specific requirements and goals, whether cost savings, carbon reduction, or microgrid integration.

### 2. System Modelling

Using your energy bill and a year of half-hourly data, we'll model your site's energy consumption to design the most efficient system for your application. This could be a standalone BESS, or a combination of BESS with solar PV, a UPS, or a generator. In line with predicted growth, additional loads and renewable sources like EV charging points and solar panels are also included in the modelling, to futureproof your BESS.

### 3. Technical Proposal

We'll present your tailored BESS solution, including a full cost breakdown and modelling regarding return on investment. This is also an opportunity to discuss how we can assist with financing and explore additional markets and revenue streams that benefit your business.

### 4. Site Visit

Our team will conduct a site visit to finalise BESS location, site details, and system selection. During the visit, we'll assess your existing equipment, infrastructure, and the proposed location for integration.

### 5. Final Proposal & Design

Following our site visit, we'll send a final proposal and detailed designs, ensuring the BESS is tailored to your specific requirements and site conditions.

### 6. Order Placement

Once the final proposal is approved, we begin with project delivery, starting the procurement process, which instigates the system build.

### 7. Installation & Mechanical Completion

Our team will arrange the delivery and positioning of the BESS and any additional equipment on-site. Our engineers will then complete the electrical and mechanical installation, ensuring installation is completed to the highest standard.

### 8. Commissioning

After installation, the BESS will be commissioned, involving performance testing. Customer training will be provided to ensure you are confident with the system's operation.

### 9. Operation & Maintenance

We offer ongoing support throughout the 20-year asset lifetime via our service and maintenance team. With over 85 dedicated engineers across the UK, we provide both planned and emergency maintenance, along with a 24/7 technical support service to ensure your system operates at peak performance.

At Dale Power Solutions, we're committed to providing you with the complete energy storage solution, from design to ongoing service support, ensuring a smooth and successful project delivery and completion.

## Modelling and Analysis

# Maximising Savings with Tailored Energy Solutions

At Dale Power Solutions, we take a data-driven approach to modelling and identifying the most effective energy storage solution for your application. Utilising your **half-hourly (HH) electricity consumption and energy bill data** our expert team performs detailed analysis to model how a **Battery Energy Storage System (BESS)** can significantly reduce your electricity purchase costs.

### Our Approach

- ③ **Data-Driven Insights:** We analyse your unique consumption patterns by assessing your HH data, which provides a clear view of how your energy use fluctuates throughout the day.
- ③ **Optimised BESS Sizing:** Using this data, we design a tailored BESS solution that optimises charge and discharge cycles to reduce energy costs during peak demand periods, leveraging the stored energy when electricity prices are highest.
- ③ **Peak Shaving and Load Shifting:** Our modelling identifies opportunities to lower your demand charges by shaving peaks in your energy consumption and shifting usage to off-peak periods, minimising your reliance on expensive grid electricity.

### Maximising Return on Investment (ROI)

By modelling the financial benefits of energy storage against your current consumption profile, we provide a clear forecast of **CAPEX payback**, ensuring that your investment in a BESS delivers measurable savings and energy efficiency.

Our sophisticated modelling tools give you the confidence that your BESS is perfectly sized and designed for your specific needs, delivering both operational and financial benefits.



## Detailed Design Solutions

# Balancing Efficiency and Investment

We understand that the success of a Battery Energy Storage System (BESS) hinges on a data-driven design that balances both performance and cost-effectiveness. Our focus is on delivering tailored solutions that provide an optimal balance between **capital expenditure (CAPEX)** and the most advanced hardware and software technologies available.

### Optimising System Efficiency

- ③ **Holistic Design Approach:** We assess your energy needs and operational goals to propose a BESS solution that integrates seamlessly with your infrastructure, balancing storage capacity, power ratings, and system performance for maximum efficiency.
- ③ **Hardware and Software Integration:** By utilising state-of-the-art hardware and intelligent software, we ensure that your BESS delivers optimal charge and discharge cycles, real-time monitoring, and automated grid participation.

### Balancing CAPEX with Long-Term Performance

Our team focuses on delivering solutions that not only meet immediate operational needs but also provide a cost-effective path to long-term energy savings. By carefully selecting the most suitable hardware, battery configurations, and software controls, we help you maximise performance without unnecessary overinvestment. This balance ensures that your initial CAPEX is aligned with your financial goals, ensuring a faster payback period and sustained return on investment (ROI).

#### CONTACT US TODAY

Discover how much you can **save** on energy bills while reducing your carbon footprint.



## Our Products

# BESS Solutions

Our battery storage solutions range from 100 kWh to 1 MWh+, offering flexible configurations to suit a wide range of applications



### Dale BESS (100kWh–1MWh)

#### Overview

Ideal for small to medium-sized commercial applications, the Dale BESS offers a capacity range of 100kWh–1MWh.

#### Applications

Commercial buildings, manufacturing facilities, retail centres.

#### Features

- ➔ Compact, integrated cabinet for space-limited sites
- ➔ 0.5C maximum charge and discharge rate, ensuring energy efficiency and load management.
- ➔ Air-cooled system with integrated HVAC for simplified installation and lower maintenance requirements.



### Scalability

Our battery systems are designed with scalability in mind, allowing businesses to start with a smaller system and expand as their energy needs grow.



### Dale MC Cube (500kWh+) and Skid Solutions

#### Overview

Tailored for large industrial sites, the MC Cube offers capacity from 500MWh and beyond, with modular skid solutions that scale up to 5.5MWh.

#### Applications

Large industrial facilities, data centres, distribution centres and logistics.

#### Features

- ➔ Containerised, modular system design for large-scale and utility applications.
- ➔ High-power discharge capability for grid-scale performance and rapid energy delivery.
- ➔ Advanced liquid cooling for enhanced thermal control and high-density operation.

## Why BESS?

# Unlock the Full Potential of Your Energy Strategy

A **Battery Energy Storage System (BESS)** is more than just a backup power source – it's a strategic asset that empowers your business to optimise energy use, enhance sustainability, and protect against rising energy costs.

At Dale Power Solutions, we deliver BESS solutions that help businesses like yours unlock the full potential of your energy resources and future-proof your operations.

### 1. Overcome Grid Connection Capacity Limitations

Many businesses face grid connection capacity limitations that restrict their ability to expand operations or increase renewable energy generation. With a BESS, you can circumvent local DNO constraints by storing excess energy produced during off-peak periods and using it when needed, without depending on costly grid upgrades. This not only maximises your generation potential but also supports business growth without the limitations imposed by the grid.

### 2. Protect Against Rising Energy Costs

Energy costs are unpredictable and continue to rise. By investing in a BESS, you can protect your business from volatile energy prices by storing electricity during lower-cost periods and using it during peak times, when prices spike. This **peak shaving** approach helps you significantly reduce your energy bills and provides a buffer against future price hikes, allowing for better financial planning and control over operational expenses.

### 3. Achieve Carbon Intensity Reduction and Support Net Zero Goals

Sustainability is no longer a choice; it's a business imperative. A BESS system allows you to significantly reduce your **carbon footprint** by optimising how and when you use your energy. By storing renewable energy and using it during peak demand periods, you can cut emissions, lower your reliance on carbon-intensive grid power, and align your operations with your **net zero** goals. It's a smart way to meet **Environmental, Social, and Governance (ESG)** targets and demonstrate your commitment to a greener future.

### 4. Maximise Self-Consumption from Renewable Energy Sources

If your business has invested in renewable energy, such as **solar PV**, a BESS allows you to capture and store the surplus energy you generate. Rather than exporting excess energy back to the grid at low tariffs, BESS enables you to **self-consume** that stored energy when demand is high, maximising the return on your renewable investment. By increasing your reliance on self-generated clean energy, you reduce your dependence on the grid and lower your overall energy costs.

### 5. Optimisation

Dale Power Solutions can introduce customers to trusted optimisers, enabling them to participate in the **Capacity Market** and generate additional revenue by supporting grid stability. This process does not affect the day-to-day use of the system, ensuring customers can continue to operate their assets as usual while benefiting from these opportunities.

- ➔ **Mitigate up to 40% Scope 2 CO<sub>2</sub> emissions**
- ➔ **Reduce the cost of energy bills by up to 80%**
- ➔ **Generate passive revenue through aggregation and the Capacity Market**

## Our Services

# Comprehensive Turnkey Solutions



### End-to-End Project Delivery

DPS offers a full **turnkey solution**, managing every stage from initial consultation to the final installation. Our services include:

- ⌚ Energy analysis and system sizing.
- ⌚ Supply and installation of BESS systems.
- ⌚ Tailored warranty solutions, with product and performance warranties available for up to 20 years.

### Ongoing Service & Maintenance

With a team of **80+ service engineers** stationed across the UK, we provide long-term **maintenance and support** to ensure your system runs efficiently throughout its lifespan. This includes planned preventive maintenance and reactive service in case of any issues.

By choosing Dale Power Solutions, you're not just getting an energy storage system — you're gaining a trusted partner dedicated to your business's success, sustainability, and growth.



### 100 kW / 400 kWh BESS Project

In 2024, Dale Power Solutions delivered a 100 kW / 400 kWh BESS at a manufacturing facility, supporting the site's transition towards a more flexible, efficient, and sustainable energy infrastructure.

The system was deployed alongside four 22 kW EV charging points, enabling the site to meet growing electrification demands despite its grid constraints. Modelling and design also needed to account for plans to install 113 kWp solar PV array to enhance on-site renewable generation, which was then installed in 2025.

Half-hourly energy consumption data was analysed to understand demand profiles, while collaboration with the University of Sheffield enabled accurate modelling of solar generation and overall system performance.

### Key Outcomes

- **30% reduction in energy costs** through load shifting and intelligent energy management
- **Over £9,000 per year in grid services revenue**, unlocking additional value from stored energy
- **Projected reduction of 27.3 tonnes of Scope 2 CO<sub>2</sub> emissions in year one**, including solar contribution

This project demonstrates how integrating **battery storage, EV infrastructure, and solar generation** can deliver a resilient, cost-effective, and low-carbon energy solution for industrial applications.



### 4.6MWh BESS Project

Dale Power Solutions supported a major banking organisation in overcoming a critical grid constraint at its Technology Centre in Manchester, enabling progress towards ambitious net-zero targets.

The site had already installed 1.9 MWp of solar PV on carports, but the local Distribution Network Operator (DNO) confirmed that this level of generation could not be directly connected to the grid without significant upgrades.

To address this challenge, Dale Power Solutions designed and delivered a 4.6 MWh behind-the-meter Battery Energy Storage System, housed within a compact 20ft skid-mounted solution. The system was engineered to operate with a strict 400 kW export limitation, ensuring full compliance with DNO requirements while avoiding costly and time-intensive grid reinforcement.

Given the site's continuous 24/7 operational demand, the solution was optimised to maximise on-site energy utilisation and system efficiency.

### Technical Solution

- ⌚ **AC-coupled architecture**, retrofitted to integrate with the existing solar PV system
- ⌚ **Dual Power Conversion System (PCS)** design for enhanced control and flexibility
- ⌚ **Intelligent energy management** to balance generation, storage, and site demand

### Project Impact

- ⌚ Enabled full utilisation of on-site solar generation despite grid constraints
- ⌚ Avoided costly grid upgrades and connection delays
- ⌚ Delivered a scalable, future-ready energy solution aligned with net-zero strategy

This project highlights how advanced battery storage solutions can **unlock renewable potential, overcome grid limitations, and deliver strong commercial outcomes** for complex, high-demand sites.

## Interested in learning more?

Contact us today for a consultation and let us help you design an energy storage solution tailored to your business needs.

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