

HIGH VOLTAGE CATALOGUE



ADVANCED ENERGY
STORAGE SOLUTIONS

+ 20.4kWh – 1290kWh

POWERING INDUSTRY



HUBBLE ENERGY DESIGNS, ENGINEERS AND SUPPLIES LITHIUM BATTERIES FOR THE SOLAR, RENEWABLE AND POWER BACK UP INDUSTRY IN SOUTH AFRICA, SUB-SAHARAN AFRICA AND EUROPE.

+ Hubble has the technology and capability to execute large commercial and industrial off grid projects.

+ The long term energy cost of such a solution is lower than most utility costs, and provides uninterrupted, secure renewable energy.

+ Hubble High Voltage solutions caters for a wide variety of needs from commercial to industrial.

PRODUCT RANGE

04 HV – SERIES

08 ENERGY CUBE

10 CONTAINER SOLUTIONS



FEATURED INSTALL

Cerebos



Our Hubble high voltage solution mitigates the impact of loadshedding, arbitrages the expensive peak electricity costs and minimizes our carbon footprint.

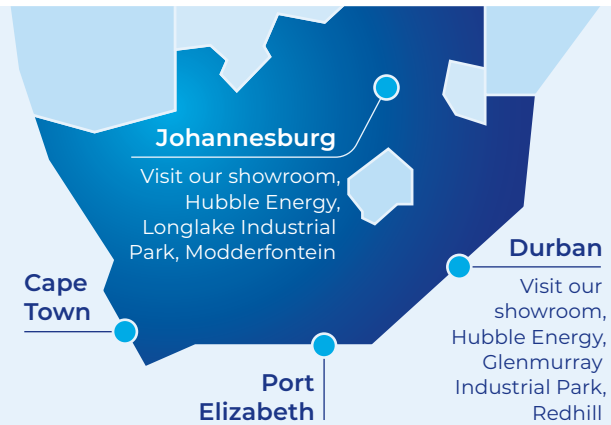
John Drinkwater
MD Cerebos

2.211MWh

76.8V 120Ah 1C battery
24 X 92.16kWh battery racks

Driven by South Africa's energy crisis, Hubble Energy is committed to transforming energy storage and reshaping the energy landscape.

With numerous high voltage projects in operation, Hubble Energy designs, engineers, and supplies bespoke high voltage solutions for the solar, renewable, and power backup industries in South Africa, Sub-Saharan Africa, and Europe.



Hubble operates in 4 Provinces across South Africa offering service, repair and training.

Comprehensive Support

- + On-site commissioning
- + Remote monitoring via EMS
- + Proactive monitoring by Hubble unified operations centre
- + Online & telephonic technical support
- + Call out options & field technicians



Local Repair Centers

- + Extensive inventory of spares
- + Swift turnaround times and localized assistance



Innovation

- + Robust in-house R&D department
- + Industry leading EMS allows for remote monitoring, management and diagnostics with leading data resolution
- + Ongoing compatibility with leading inverters

Industry Leading Warranties

- + Optional Service Level Agreements
- + 10-year warranty available on all High Voltage products*



“Hubble Energy products are designed for easy installation, innovative functionality, and excellent quality. They provide cost savings, energy independence, reliable power supply, and promote environmental sustainability.”

* Container PCS warranty extendable from 5 years to 10 years.

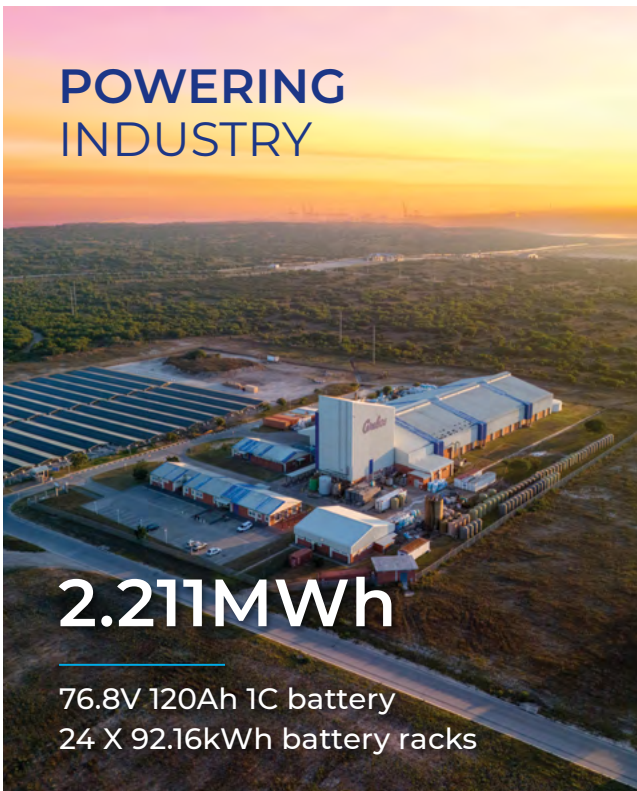
POWERED BY HUBBLE ENERGY

**HUBBLE ENERGY WORKS FROM
THE BUSH TO THE BEACH AND
EVERYWHERE IN-BETWEEN**

Custom Solutions

Energy needs are not one size fits all so Hubble appraises your business needs based on your current energy consumption and future scale. Alongside Engineering, Procurement and Construction (EPC) partners, we're here to advise you every step of the way. Our in-house research and development engineers and software developers are equipped to solve unique energy challenges using the best energy technology worldwide.

POWERING INDUSTRY



2.211MWh

76.8V 120Ah 1C battery
24 X 92.16kWh battery racks

When load shedding and high power costs threatened the viability of their salt manufacturing plant, Cerebos turned to Hubble's High Voltage Battery System. With up to 30% of the cost of salt manufacture being electricity, they had to find a solution without affecting the cost to customer.

Cerebos partnered with Avianto Energy, who had experience at this scale and were open to finding economical solutions and sharing the process so that the Cerebos team could repeat the work at future salt work sites. They ultimately chose a hybrid system with batteries and solar panels. Overall the scalability of Hubble's system was perfect for their constraints as they could fit more than three times the capacity that would have been possible with an industry standard high voltage infrastructure.

After a year in the making, Hubble's new power system is set to reduce Cerebos's power costs, mitigate the impact of load shedding and utilise the batteries to arbitrage the expensive winter peak electricity costs.

POWERING LUXURY



204kWh

4 X HV512
Battery sets installed

Faced with the challenge of a remote location and the need for a sustainable and eco-friendly system, the Outpost, a luxury game lodge in the Kruger National Park, chose Hubble's High Voltage System.

They needed an on-site, off grid system that allowed them to keep powering, no matter the circumstances. They now have 118 on-site solar panels which run on a Hubble battery system of 209,1kWh. This system can recharge within seven hours of daylight and power 100% of the lodge's needs, which include full lodge operations as well as conservation, wildlife-monitoring and anti-poaching security devices. Using innovative smart technology, the system is easily upgradeable and can be fitted into standard server cabinets.



POWERING SUPPLY

1.74MWh

34 X HV512
Battery sets installed

With load shedding constantly disrupting their printing schedules, Lebone Litho Printers needed an energy solution that would ensure seamless delivery on their projects. To solve this impact they turned to Betsani Holdings who chose to use the Hubble High Voltage battery units for an energy solution that works alongside their nearly 2000 solar panels and eight inverters.

Their greatest challenge for the solar installation was the irregular roof top while the rack mount system offered by Hubble units made it easy to transport and install the 27 modules, particularly given some spaces were on the second stories of the building. The Hubble innovative smart technology allows for an easily upgradable solution and features intelligent touch screen display and wif-fi-enabled monitoring.



POWERING SOLUTIONS

204kWh

4 X HV512
Split into 2 X battery sets

High energy costs and unreliable power led Bud Rental Services (BRS) to Hubble's High Voltage Battery Solutions. Maintaining energy to deliver on a large project for Murray & Dickson, a leading infrastructure contractor, had meant BRS were spending up to R70k per month to fuel their diesel generator.

They consulted with Sinani Energy, a Solar PV and Battery Energy Storage System specialist, who suggested the Hubble High Voltage System for its innovative container solution, smart technology, leading easy upgrades and compatibility with most high voltage inverters. BRS are starting with four projects in a range of applications, which Hubble's easy-to-transport, purpose built and scalable design will easily allow.



CONTAINER SOLUTIONS

430kWh

2 x 215kWh battery clusters
500kW MPS hybrid inverter

Upon relocating to their modern, energy-efficient premises, Goscor Lift Trucks seized the opportunity for a fresh start by addressing unreliable grid power and rising electricity tariffs.

Partnering with Green Wave Energy, they equipped their new facility with 600 x 550W solar panels and a 500kW inverter, housed in a 20ft Hubble Energy Container with a 430kWh battery storage capacity. By choosing this solution over a diesel alternative, Goscor is achieving significant cost savings while transitioning to a sustainable and reliable energy solution.

The all-in-one container solution features modular Hubble High Voltage 215kWh 0.5C battery clusters and can withstand tough conditions, making it ideal for areas facing connectivity, reliability and remote access challenges. Hubble Energy's outdoor solutions are backed by a local team for on-site assistance and commissioning as well as remote monitoring, management and diagnostics via EMS.



ENERGY CUBE

The all-in-one silent Energy Cube (107kWh & 215kWh) is ideal as a generator replacement, with easy installation and no rigging required.

AVAILABLE SEPTEMBER 2024

HV – SERIES (1C)

The Hubble High Voltage System uses **innovative smart technology** to bring you an easily upgradeable solution, with an **advanced BMU** that automatically detects the number of modules connected. It is easy to transport and install with a **modular, buildable design** that fits into standard server cabinets.

Featuring an intelligent **touchscreen display** and **Wi-Fi-enabled monitoring** for both live and historical data and improved control over mission-critical features. The range currently includes four models, ranging from 204-615V, built with a **1C rating, a rated capacity (5hr) of 100Ah**, and can be **paralleled up to 8 battery clusters** with full communications.



HV-204



HV-307



HV-410



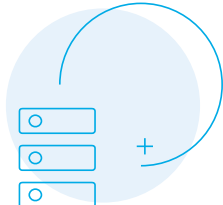
HV-512



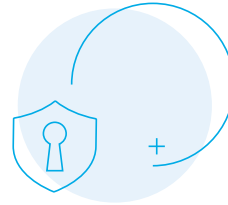
HV-615



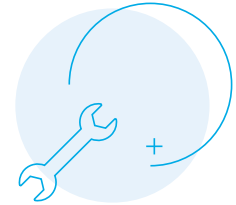
**REMOTE MONITORING +
TECHNICAL SUPPORT**



SCALABLE



**SAFE +
RELIABLE**



**EASY INSTALLATION +
ON-SITE COMMISSIONING**

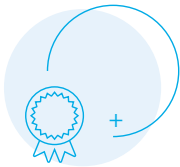
Item	HV-204	HV-307	HV-410	HV-512	HV-615
Design Capacity	20.4 kWh	30.7 kWh	41.0 kWh	51.2 kWh	61.5 kWh
*Rated Capacity (5HR)	100 Ah				
Nominal Voltage	204 V	307 V	410 V	512 V	615 V
Discharge Cutoff Voltage	179 V	269 V	358 V	448 V	576 V
Equalized Charge Voltage	223 V	335 V	446 V	557 V	668 V
Max. Continuous Charging Current	100 A				
Max. Continuous Discharging Current	100A				
C Rating	1.0 C				
Depth of Discharge	100%				
Cycle Life @ 1C	+/- 6000 Cycles @ 50% DOD, Above 3000 cycles @ 100% DOD				
Design Life	+/- 15 Years				
Monitoring	Wi-Fi enabled cloud monitoring				
Parallel	Parallel connection up to 8 packs with full communications				
Ports	1x CAN-bus, 2x Battery Link Ports				
Cells	New Li-ion Prismatic LiFePO4 Cells				
Cells Per Pack	16 Cells per pack				
Total Cells	64 Cells Total	96 Cells Total	128 Cells Total	160 Cells Total	192 Cells Total
Protection	Electronic Circuit Breaker, BMS Voltage Protection, Current Limiting				
Operating Temperature	Charging: 0 to +55°C Discharging: 0 to +55°C Storage: 0 to +55°C				
Weight	Approx. 230kg without cabinet	Approx. 400kg without cabinet	Approx. 450kg without cabinet	Approx. 550kg without cabinet	Approx. 650kg without cabinet
Dimensions (HxWxD) mm	22U Cabinet: 1200 x 610 x 1102	47U Cabinet: 2200 x 610 x 810			
Outer Package Material	Black Baked Lacquer Steel Case				
Certification	CE, UN38.3, GBT31484-2015, GBT31485-2015, GBT31486-2015				

* Due to continuous product improvements specifications are subject to change without prior notice.

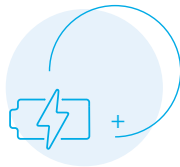
HV – SERIES (0.5C)

The HV-768 features a **modular, easy to install design** and an **intelligent touchscreen display** for both live and historical **remote monitoring & management**.

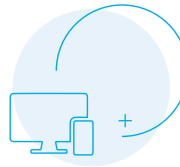
Built with a **0.5C rating**, the units can be **paralleled up to 10 battery clusters** (up to 2.15MWh) with full communications and remote monitoring.



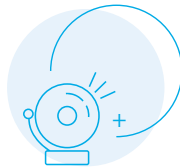
SUPERIOR CYCLE LIFE
10 000 CYCLES



CELL LEAKAGE PROTECTION



REMOTE MONITORING + TECHNICAL SUPPORT



INTELLIGENT FIRE DETECTION SYSTEM



- + Intelligent Touch Screen
- + High Cycle & Service Life
- + Compatible with leading Inverter Brands
- + Modular HV System for ease of Transport and Installation
- + Intelligent Operation + Management Via EMS
- + Superior Cycle Life
- + Built-in Safety Protection
- + Fire Detection
- + High-Capacity & Storage Performance
- + Parallel up to 10 Battery Clusters (Up to 2.15MWh With Full Comms)

Item	Specifications
Model	Hubble HV 768-215
Rated Voltage	768 V
Rated Capacity	280 Ah (0.5C)
Voltage range	720~840 V
Recommended Charge/Discharge	140 A (0.5C) / 140 A (0.5C)
Continuous Maximum Charge/Discharge	200 A (0.7C) / 200 A (0.7C)
Rated Energy	215.04 kWh
Rated Continuous Power	107 kW
Cooling Type	Forced Air Cooling
Operating Temperature	-10~50 °C
Relative Humidity	5%~95%R.H
Altitude	<3000m
Recommended DoD	90%
Communication Method	CAN/RS485/4G
Working Indicator	Green: Run; Red: Alarm
Cycle Life	10 000 cycles at 80% DOD @ 25 ± 2°C, 70% EOL, 0.5C/0.5C
Display Method	10 Inch (LCD) / PC Software Protection Voltage Protection
Protection Voltage	Over Charge and Over Discharge
Protection Temp	Over Temperature Range Protection
Overcurrent Protection	YES
Current Leakage Detection	YES
Voltage Leakage Detection Certifications	YES
Dielectric Withstand Voltage	2500 VDC (not less than 2GΩ)
Short Circuit Current	>9000 A
Dimensions	1101mm(L)*1030(W)*2300(H)
Transport Certification	UN3480 & UN38.3,CE
Weight	Approx.2100 kg
Design life	15 years

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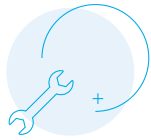
ENERGY CUBE

In the day-to-day of diesel costs and high noise levels, Hubble Energy introduces the **silent generator**, the Energy Cube.

The Cube, an all-in-one solution (107kWh & 215kWh), can be used as a **generator replacement** and contains a **fire suppression system** as well as a **world-class EMS** for remote monitoring and management.

Features

- + EMS, PCS & STS
- + 10 Year Warranty
- + <20ms Transfer Time
- + Off-Grid, On-Grid & Solar Ready
- + Blade LFP Cells (Safest in the Industry)
- + Forkliftable, Easy Rigging Eye Bolts
- + IP54 Certified
- + Intrusion Alarm
- + Grid Connection Certified (NRS)
- + Fire Suppression & Alarm System
- + Intelligent Operation & Maintenance
- + Integrated Industrial Air Conditioning System



EASY INSTALLATION +
ON-SITE COMMISSIONING



REMOTE MONITORING +
TECHNICAL SUPPORT



SERVICE LEVEL
AGREEMENT (OPTIONAL)



INTELLIGENT
FIRE SUPPRESSION
SYSTEM



ENERGY CUBE

PV PARAMETERS**63kW/107kWh CUBE****105kW/215kWh CUBE**

Max PV Power	50kW	100kW
MPPT QTY	1	2
Max PV Current	100A	200A (100A+100A)
Max PV VoC	650V	
MPPT Operating Power	250V - 650V	

DC PARAMETERS**63kW/107kWh CUBE****105kW/215kWh CUBE**

Battery Cell Capacity	131Ah	262Ah
Material	LFP Prismatic	
Battery Pack Configuration	2 X 16S X 16S	
DC Working Voltage Range	768V-869V	
Rated Voltage	819.2V	
Rated Energy	107kWh	215kWh
Charging & Discharge Rate	0.5C	

AC PARAMETERS**63kW/107kWh CUBE****105kW/215kWh CUBE**

Rated Output Power	63kW	105kW
Max. Output Power	63kW	105kW
Max AC Charge Power	50kW	100kW
Rated On-Grid Voltage	400VAC (±15%)	
Output Voltage Frequency	50Hz/60Hz±2.5Hz	
Grid Connection	3P4w+PE	

SYSTEM PARAMETERS**63kW/107kWh CUBE****105kW/215kWh CUBE**

Size (W*D*H)	1850mm*1250mm*2280mm	
Net Weight	About 2,8T	About 3,5T
Protection Grade	IP54	
Anticorrosion Grade	C4 High Protection	
Working Temperature	-20°C ~ +55°C	
Working Humidity	0~95% No Condensation	
Working Altitude	<3000m	
Cooling Method	Industrial Grade Air Conditioner	
Noise Emission	Standby <50 (dB), Operating <70 (dB)	

COMMUNICATION PARAMETERS**63kW/107kWh CUBE****105kW/215kWh CUBE**

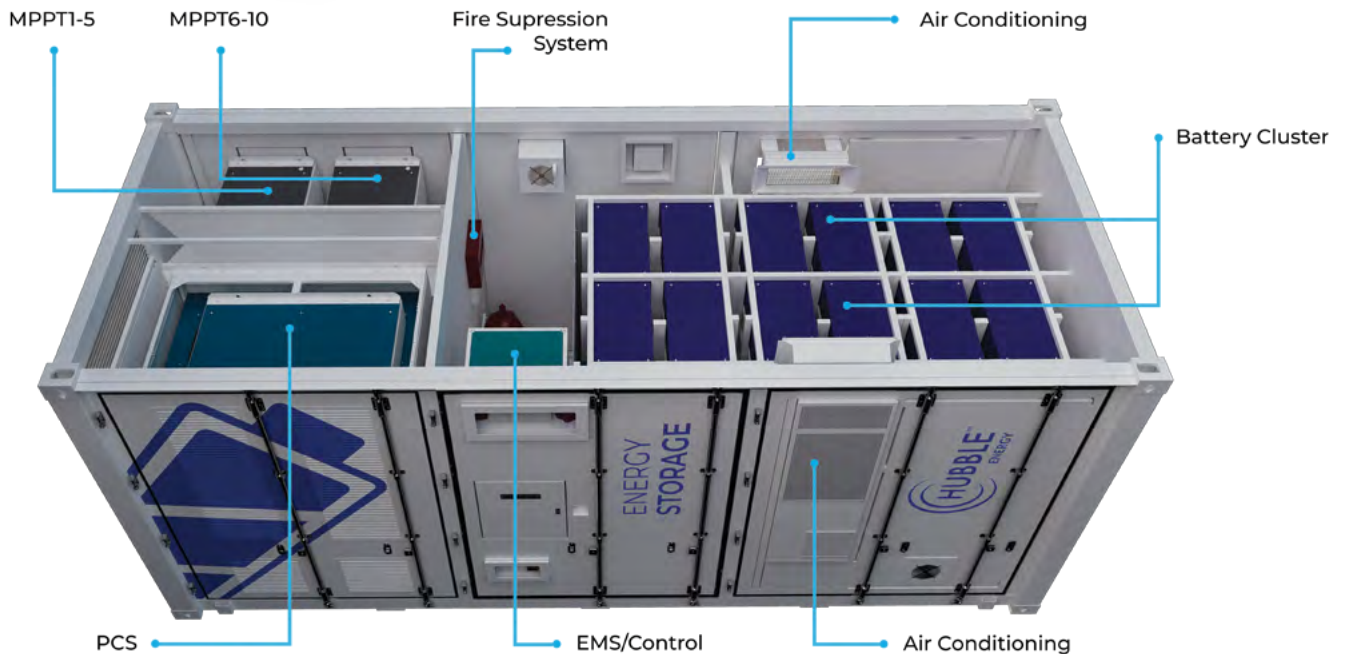
Communication Port	Ethernet/GSM 4G	
Communication Protocol	Modbus/CAN	

CERTIFICATION

UN 38.3, NRS 097-2-1:2017 EDITION 2.1, IEC 60870-104, IEC 61850, EN 62477-1:2012+A1:2017, EN 62477-1:2012+A12:2021, EN 50549-1:2019+AC:2019-04, EN IEC 61000-6-2:2019, EN IEC 61000-6-4:2019, IEC 61000-6-2:2016, IEC 61000-6-4:2018

CONTAINER SOLUTIONS

SCALABLE
215 – 1290kWh



100 – 500kW 215 – 1290kWh

- + Off Grid, On Grid & Solar Ready
- + Industrial Transformer Inverter System
- + Integrated Industrial Air Conditioning System
- + Fire Suppression, Smoke Detectors & Alarm System
- + 10 Year Warranty on Batteries, 5 Year on Inverter, Extendable to 10 years
- + Scalable Bespoke Solutions
- + On-Site Assistance & Commissioning
- + System Certified: **UN3536**
UN38.3
NRS097
IP54

Bespoke Solutions

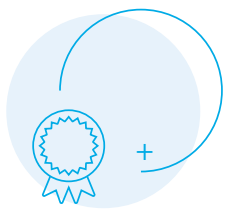
Our dedicated team can create custom solutions that match your distinct requirements.

Free Remote Monitoring

Allows for real-time and historical data monitoring. Our internal control room and dedicated monitoring team can quickly provide diagnosis and support.

Durability

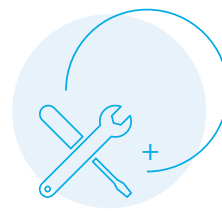
Our containers are built to withstand tough conditions, ensuring uninterrupted power when you need it the most.



SUPERIOR CYCLE LIFE
10 000 CYCLES



REMOTE MONITORING +
TECHNICAL SUPPORT



SERVICE LEVEL
AGREEMENT (OPTIONAL)



INTELLIGENT
FIRE SUPPRESSION
SYSTEM

CONTAINER SOLUTIONS

BATTERY PARAMETER

Battery Module Nominal Voltage	51.2V
Battery Module Energy	14.336kWh
Battery Cycle Life	10 000 Cycles at 80% DOD @ 25 ± 2°C, 70% EOL, 0.5C/0.5C
Rated Voltage	768V
Battery Voltage Range	720-840V
Battery Capacity	215-1290kWh
Smart Cooling	HVAC + Aircon

AC ON-GRID PARAMETER

Rated Charge/Discharge Power	100-500kW
Rated Grid Voltage	AC340V-460V
Applicable Grid Frequency	50/60(-2.5~2.5) Hz
MAX. Current	880A
THDi	<3%

AC OFF-GRID PARAMETER

Rated Charge/Discharge Power	100-500kW
Rated Grid Voltage	AC340V-440V
Rated Frequency	50/60(-2.5~2.5) Hz
THDu	≤2%
Cooling Method	Forced Air Cooling

SYSTEM SPECIFICATION

Firefighting System	Controller, Detectors, Alarms & Extinguisher
Operating Temperature Range	-20-50°C
Operating Humidity	0%-95%R.H
Dimension (W*D*H)	6058*2896*2438mm
Weight	6.1 to 23 Ton
IP Rating	IP54
Anticorrosion Grade	C4 High Protection
Communication Port	CAN, RS485, 4G/GPRS

COMPLIANCE

Battery	UN38.3, UN3536, IEC62619
Inverter	CE LVD IEC 62477, CE EMC IEC 610000, EN 50549-1:2019, G99, AS4777, NRS097

* Due to continuous product improvements specifications are subject to change without prior notice.

POWERING YOUR BUSINESS



JOIN THE HUBBLE EVOLUTION

The new generation Hubble Energy container transforms energy storage, offering several options with various configurations to suit commercial and industrial businesses needs.

Power

Scalable bespoke solutions available from 100–500kW and 215–1290kWh modular BESS

Energy from solar panels or the grid is stored in a convenient, purpose built and easy-to-install containerized solution

Quality

Innovative and advanced battery technology with safety features including built-in fire suppression, smoke detectors and alarm system

Protect

Your business is protected with remote monitoring and technical support with reliable power supply and energy independence

Control

On-site assistance and commissioning ensuring ease of installation



Residential | Commercial | Industrial
hubbleenergy.com





HUBBLE ENERGY
IS A MEMBER OF
THE BUD GROUP

The Bud Group is a services, manufacturing and distribution group.

A diversified group, operating across manufacturing,
industrial services, minerals beneficiation and energy solutions.

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