

# GivEnergy

## Key Features

- GivEnergy Cell Chemistry (**LiFePO<sub>4</sub>**) **Safest cell technology on the market**
- New improved Battery Cell Technology (**61.5Ah @3.2V**) **Higher Capacity cell than competitors**
- High Energy Dense Cell (**170Wh/Kg**) **More energy dense than competitors**
- We manufacture prismatic cells over conventional soft pouch cells (even energy density and **minimises heat build-up**)
- Our Cells are **Fully Recyclable-Non LiFePO<sub>4</sub> Cells are expensive to recycle so get re purposed.**
- Our Cells **DO NOT contain Cobalt** which generates its own oxygen when stressed, causing an ignition source.
- Our Cells are **NON flammable**
- Our cells are **NON toxic**
- Each cell can be monitored and **each cell can be individually balanced-Other battery packs only monitor Pack voltage, not cell voltage**
- **Bespoke Battery management system** designed and manufactured in house-**Designed and manufactured by us to work with our system, not imported from a 3rd party.**
- All systems are designed and **manufactured in house from powder to power.**Designed and **manufactured by us to work with our system, not imported from a 3rd party.**
- Full in **house designed software platform** supplied with every system. **We do not adapt a 3rd party platform as causes loss of information and inaccurate data.**
- In House Hardware and Software engineers available for support
- **UK technical backup and support**
- **Full unified system** designed and manufactured to work as one (**No Third-Party products**)
- **Market leading warranties**
- All Battery cells manufactured and tested with strict tolerances (**Grade A Cells Only**)
- Low Cell internal resistance (**≤0.65mΩ**)  
°C °C
- Cells operate at a wide temperature range (**-20 to +55**)
- AC Coupled Technology- Can be charged from the grid or from surplus renewable generation such as **Solar, Wind, Hydro.**
- Hybrid technology- both AC and DC coupled- **DC to DC charging** minimising losses and maximising efficiency. Can also be charged from the Grid utilising a **flexible energy tariff.**
- High system round trip efficiency-**92.5% (Hybrid technology) Other systems are less efficient**
- Smart monitoring portal for **full monitoring and remote control of all assets**
- iPhone application for monitoring-end user
- Easy to install- **plug and play**
- **IP65 Protection** so can be installed outdoors
- **Dynamic System Logic** so can switch simultaneously between charging and discharging to **minimise Imported energy from the grid. This is bespoke logic designed in house**
- **Integrated Class 1 smart meters** for greater accuracy, can also be used for billing purposes. **Other systems use CT For measuring.**
- **G83/G59/G98/G99/G100/EN50438** Grid Recommendations
- All system **tested and certified by TUV and verified by intertek**
- **Export limitation available** with all system upon request
- We can fit up to **3.5MWh in a single 40ft Container**
- **New Ultra intelligent EMS** (Energy Management System) with up to 120 smart monitoring points for building loads and renewable generation. **Only one of its kind in development**

- Commercial systems can integrate into existing building management systems-**SCADA, MODBUS, CANBUS, PROFIBUS, BACNET** etc
- Commercial systems modular and **Fully integrated with IG55 inert gas fire suppression system, HVAC, emergency power and lighting.**
- Commercial battery packs have a **multi-layer BMS for greater control and flexibility** over charge and discharge. **Competitors only use single layer BMS**
- **Multi-layer monitoring** so each cell can be monitored and balanced. **Unique to our system**
- Can be integrated with other forms of renewable generation.
- **10-year warranty** on batteries or **warranted throughput of 10MWh per 1kWh** stored capacity @1C whichever comes first. **Market leading warranty**
- **5-year warranty on inverter** with **extension available up to 10 years.**
- **Wi-Fi/3G/Ethernet communication**
- **RS232, RS485, USB, RJ45** connection points
- System can be used for **triad avoidance, DUoS, Load shifting, Peak shaving, Grid support**
- System can be **dynamically controlled for grid balancing mechanisms**
- Commercial battery systems can be supplied as a racking system, containerised system and are **completely modular** so there is no limit on capacity.

