

GivEnergy[®]



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Thank you for choosing GivEnergy®

With your new Smart Energy Storage System you will now be able to store surplus renewable energy (Generated from your solar panels) during the daytime and use it, when you need it, Maximising your self consumption, and doing your bit for the environment by using clean energy.

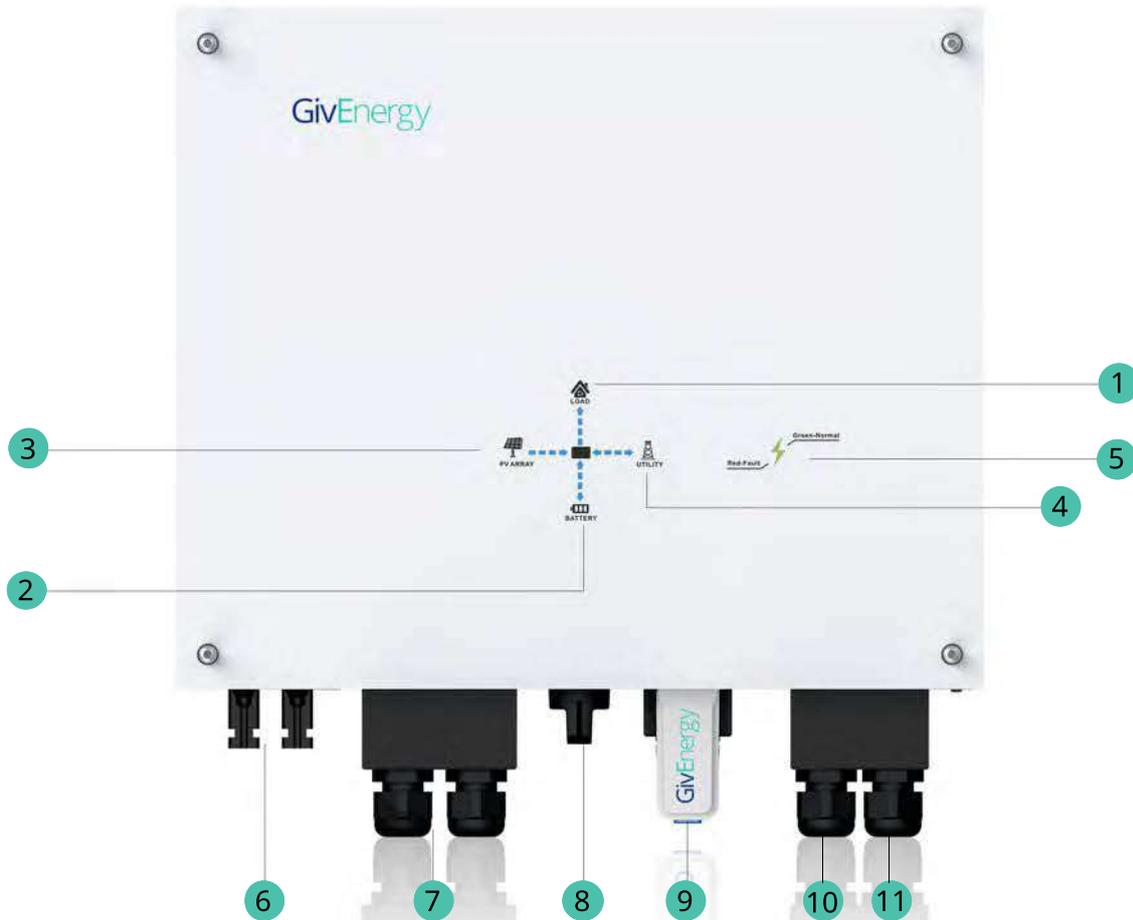
Your GivEnergy system is capable of charging your batteries utilising an off peak or flexible energy tariff to provide additional savings through load shifting, whereby your costly daytime energy can be shifted onto a cheaper, more eco friendly energy tariff, using renewable energy that is generated across the country.



If your system is fully equipped and installed with one of our smart meters, rest assured that the slightest change in demand or energy consumption will be detected by our smart energy management system and our inverter will deliver enough power from the Solar PV and Battery pack to ensure that as little energy is imported from the grid as possible.

Our aim is to achieve grid neutrality by smartly managing onsite renewables such as solar PV so that you are paying for as little energy as possible!!!

Getting to know your system



- 1) Home Demand
This is a calculation made by our smart energy management system and is lit up when a load is detected, within the property
- 2) Battery
When the battery is being charged the arrows pointing towards the battery pack will be lit. When the battery is discharging the arrows pointing away from the battery will be lit.
- 3) Solar PV
When solar PV generation is detected the inverter will indicate that the energy is being converted from DC energy to AC energy, and can be used within the home.
- 4) Grid
When Energy is being imported from the grid the arrows pointing towards the PCS will be lit. When Energy is being Exported to the grid the arrows pointing towards the grid will be lit. The natural logic of the system will try to balance this so you are importing/exporting as little as possible
- 5) Inverter Status
Green (Normal), Yellow (Communication Issue), Red (Fault)
Green Flashing - The system is waiting for available power to manage.
- 6) Solar PV Connection
- 7) Battery Connection
- 8) Solar PV DC Switch
- 9) Wi-Fi Communication Device
- 10) Back up supply
which can be used to power essential circuits in the event of a grid failure or power cut.
- 11) Grid supply Connection
Allowing the system to provide power back into your home

Getting to know your Battery Pack



- 1) On/Off Switch - Press Once to turn on, press and hold to turn off
- 2) Status Indicator- Green (Normal), Yellow (Communication Issue), Red (Fault)
- 3) SOC Indicator- 25%/50%/75%/100% State of charge
- 4) Power Connection.

Note: If you see or red status light on the front panel, Please contact your installer and we will assist them in identifying and rectifying the issues as quickly as possible

Understanding your Solar PV System

If you have a Solar PV system but are unsure exactly how it works, we will explain clearly how your system functions to reduce your electricity consumption and save you money.

A Solar PV system works by converting DC Electricity from your Solar Panels and converting that into AC electricity which can be used in and around your home to power your electrical appliances.

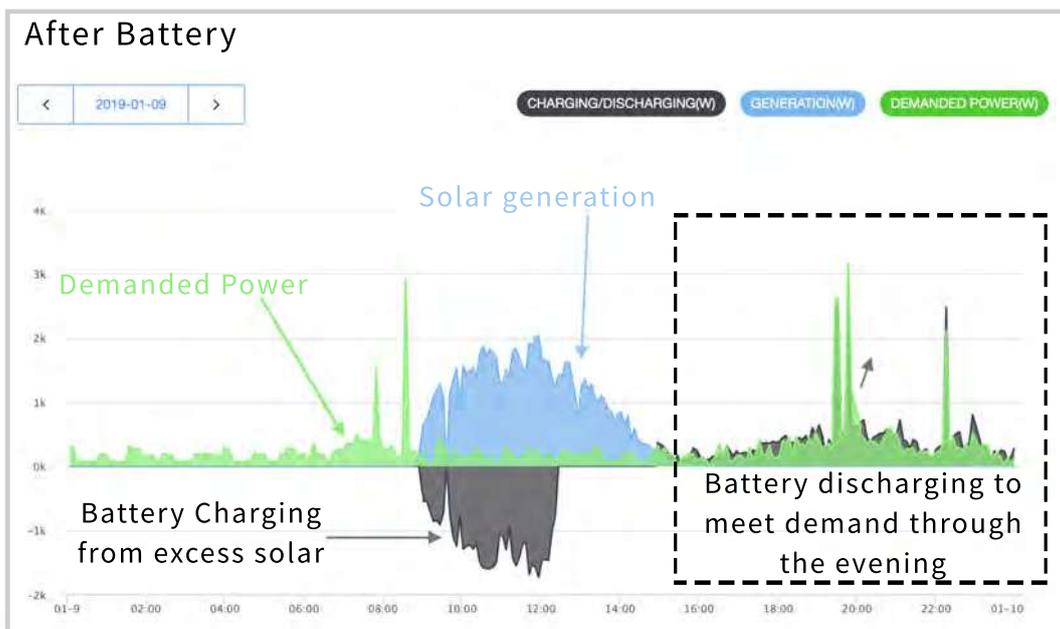
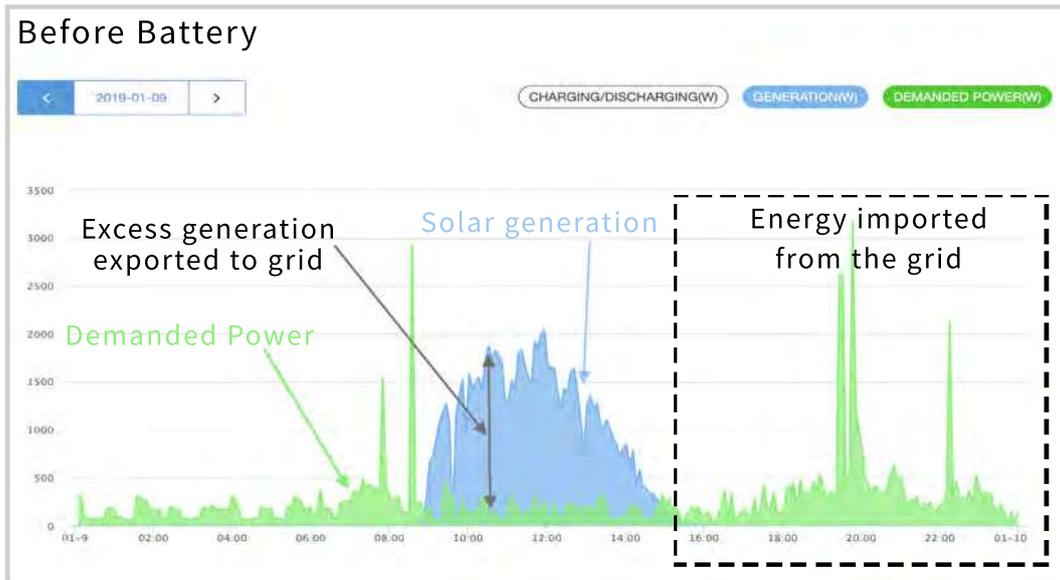
Depending on the time of year your solar panels vary in what they will generate so managing your energy consumption is very important.



Solar panels will always generate during daylight hours no matter how much energy you are using in the home, if you do not use it to power your home it will get sent back to the grid. If you are using more energy in the home than you are generating from your solar, then you are buying that energy back in from your electricity supplier.

This is where GivEnergy's Smart Home management system comes into play. The system will always try and store any excess electricity from PV if it is available so that when you need more energy, the batteries will discharge to meet that energy demand so you are not paying for that additional energy from your supplier.

How Your System will Operate



This is the standard logic for all GivEnergy Battery systems, whether you have an AC Coupled or Hybrid Inverter installed in your home. If you want to make any changes to this logic, this can be done through your GivEnergy Cloud, online monitoring portal

How to best use your system

The system is designed to manage your energy for you so you don't have to worry about it. The system will consume and store renewable energy when its free instead of sending it back to the grid, so you don't have to worry about spending money buying additional energy from your energy provider.

TOP TIPS

- 1) Your system should be set to MODE 2 in your remote settings page. This will ensure that the system works dynamically to maximise your self-consumption.
- 2) If you have an off Peak or Economy 7 Tariff, utilise this the best of its capability. The Inverter can be set to charge the batteries using a cheap night rate and you can use this energy to offset your daytime energy when electricity prices are higher.



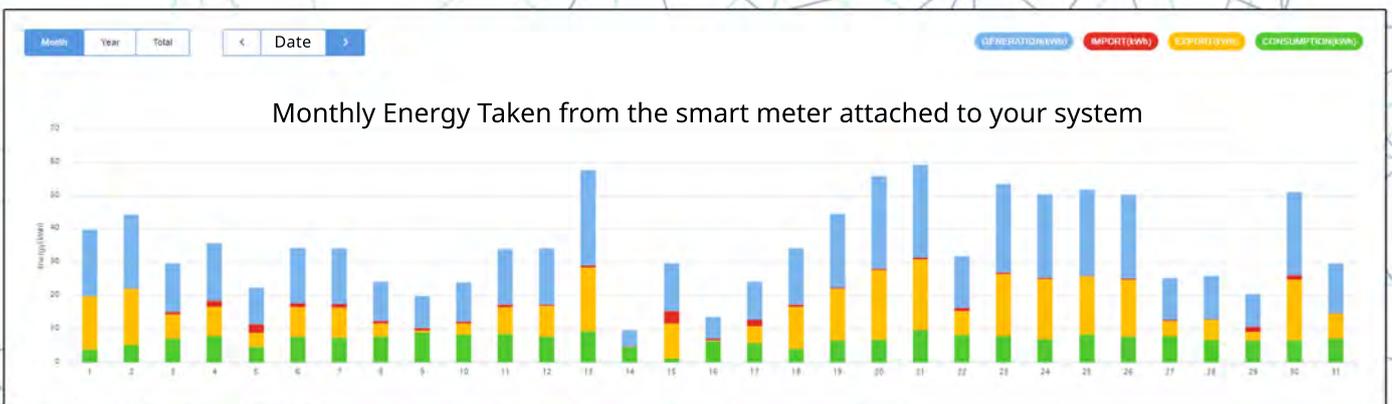
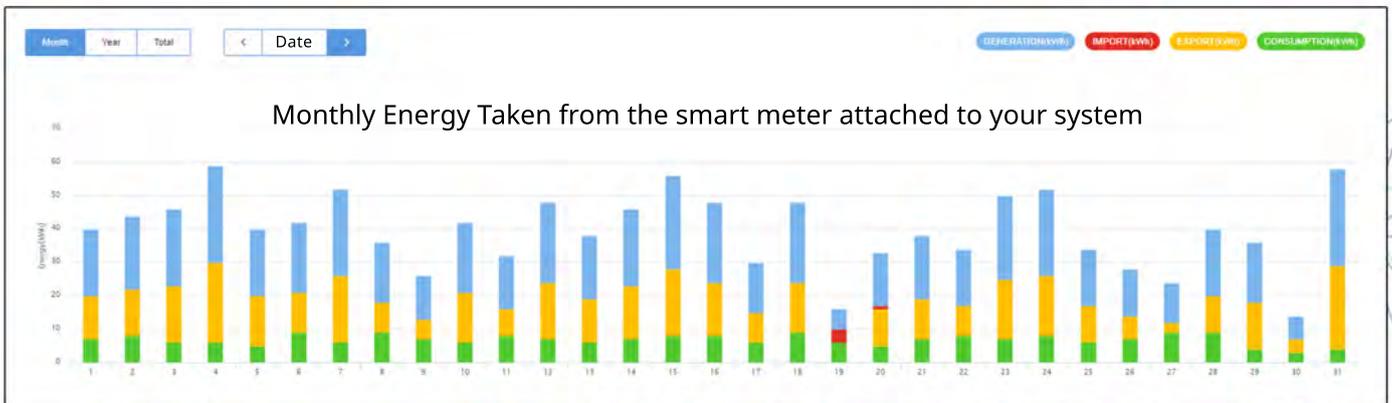
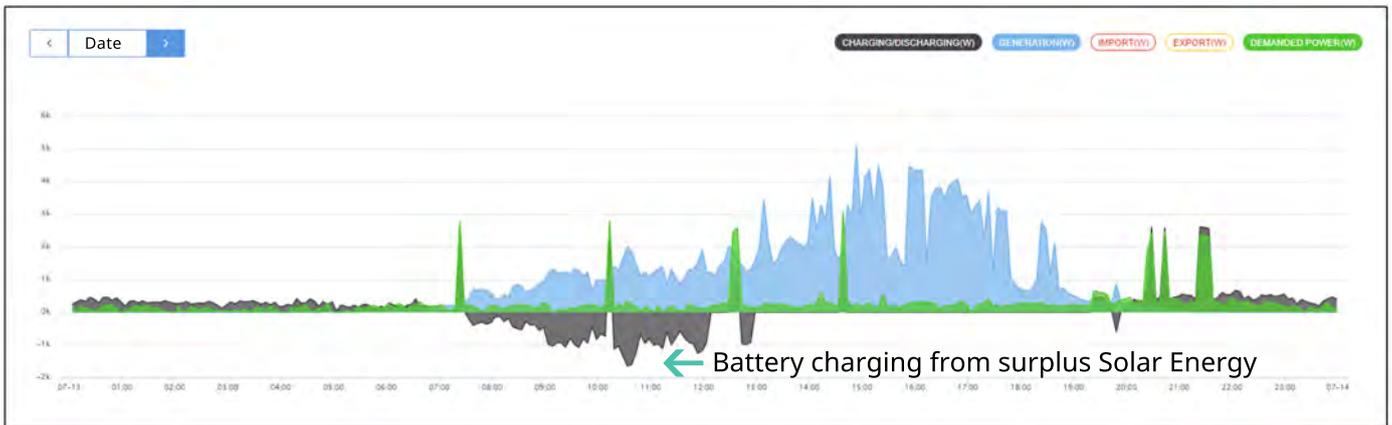
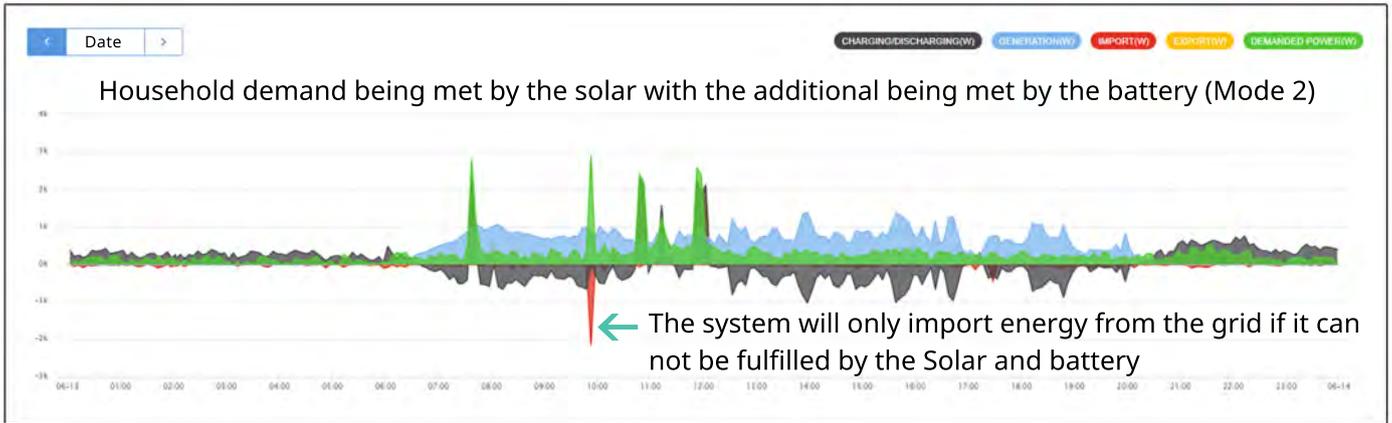
- 3) Keep the battery topped up from the grid early hours in the morning. This will help maintain the battery and its efficiency. Don't worry about the fact that you are paying for that energy because it will get used later on in the day, so either way you can pay for it in the morning when its more environmentally friendly or you can pay for it during the day. There is no difference as you will be using the same amount of energy, however its good to keep the battery maintained.

Getting to know your Online Portal



- 1) Weather Integration - Realtime weather information to assist with system performance analysis.
- 2) Power Flow Diagram - A visual representation of your energy
- 3) Mode Settings - Change how you want the system to operate
- 4) CO2 Emissions - An overview of your total co2 savings
- 5) PV Power - The total generation from your solar panels
- 6) Home Consumption - Real time usage of energy within the home
- 7) Battery - Realtime battery power usage
- 8) Grid - Import / Export of energy to and from the home
- 9) Daily Power Graph - A full insight of your daily system operation

Daily power graph showing House demand, Solar PV generation and Battery usage



Charge Modes

The Givenergy Battery System is able to work with the ever changing seasons , with this in mind the portal has the functionality to adjust the charge modes to suit.

Mode 1

This mode stores renewable generation in the battery pack during the day and is released in the evening to cover the demand within the property. Please note with this mode, if using energy during the day, this will be imported from the grid and will not be supplied from the battery pack.

Mode 2

This modes allows the system to work dynamically where by the household demand is met by renewable generation and any spare available power will be stored in the battery pack. If the demand exceeds the renewable generation during the day, the battery will stop charging and discharge to assist the renewable generation to power the home. This mode maximises self consumption and minimises energy imported from the grid.

The screenshot shows a web interface for setting the battery system mode. At the top, there is a warning: "Mode Set: Please don't close or refresh this page while setting." Below this, four modes are listed, each with a radio button and a "Mode Set" button:

- Default Mode 1:** This mode is for systems with sufficient PV generation and keeps the stored battery energy to evening. The battery is fully charged in the day by the PV and will start to discharge in the evening. This mode does not use supplemental AC charging overnight.
- Default Mode 2:** This mode designed to balance the use of PV during the day and battery to supplement when the PV is insufficient. The aim is to be grid neutral and prioritise the home load from any source and uses the grid as a last resort. This mode does not use supplemental AC charging overnight.
- Smart Charge Mode 3 (Smart Charge Status: On):** This mode allows a custom AC charge setting. Particularly useful in winter and if you're on a flexible energy tariff (eg economy 7/10, ToU, Agile etc).
AC Charge Start Time: 0000
AC Charge Stop Time: 1200
Percentage to charge up to (4%-100%): 8
- DSR Mode:** This mode allows spare battery energy to discharge to grid for Demand Side Response. The DSR timing setting is as below.
DC Discharge 1 Start Time: 0000-0400
DC Discharge 1 End Time: 0000-0400
DC Discharge 2 Start Time: 0000-2400
DC Discharge 2 End Time: 0000-2400

Smart Charge Mode 3

This mode allows you to charge the battery pack from the grid. This is a useful feature if you have an economy 7 tariff or flexible energy tariff. The system also allows you to charge the battery up to a specific % which can come in very handy in the winter months when renewable generation is minimal.

DSR Mode

This mode allows you to discharge the battery at full power either back into the home or back into the grid. This is useful if you are on a flexible energy tariff where electricity prices are higher in the evening or if you have access to an export tariff and get paid to send electricity back to the grid.

Note: Please click on the radio button at the side of the mode in which you want to select, input the values into the boxes such as charge times (24hour clock) then press the mode set button relating to the mode selected. Please do not close or refresh the page whilst setting the system mode.

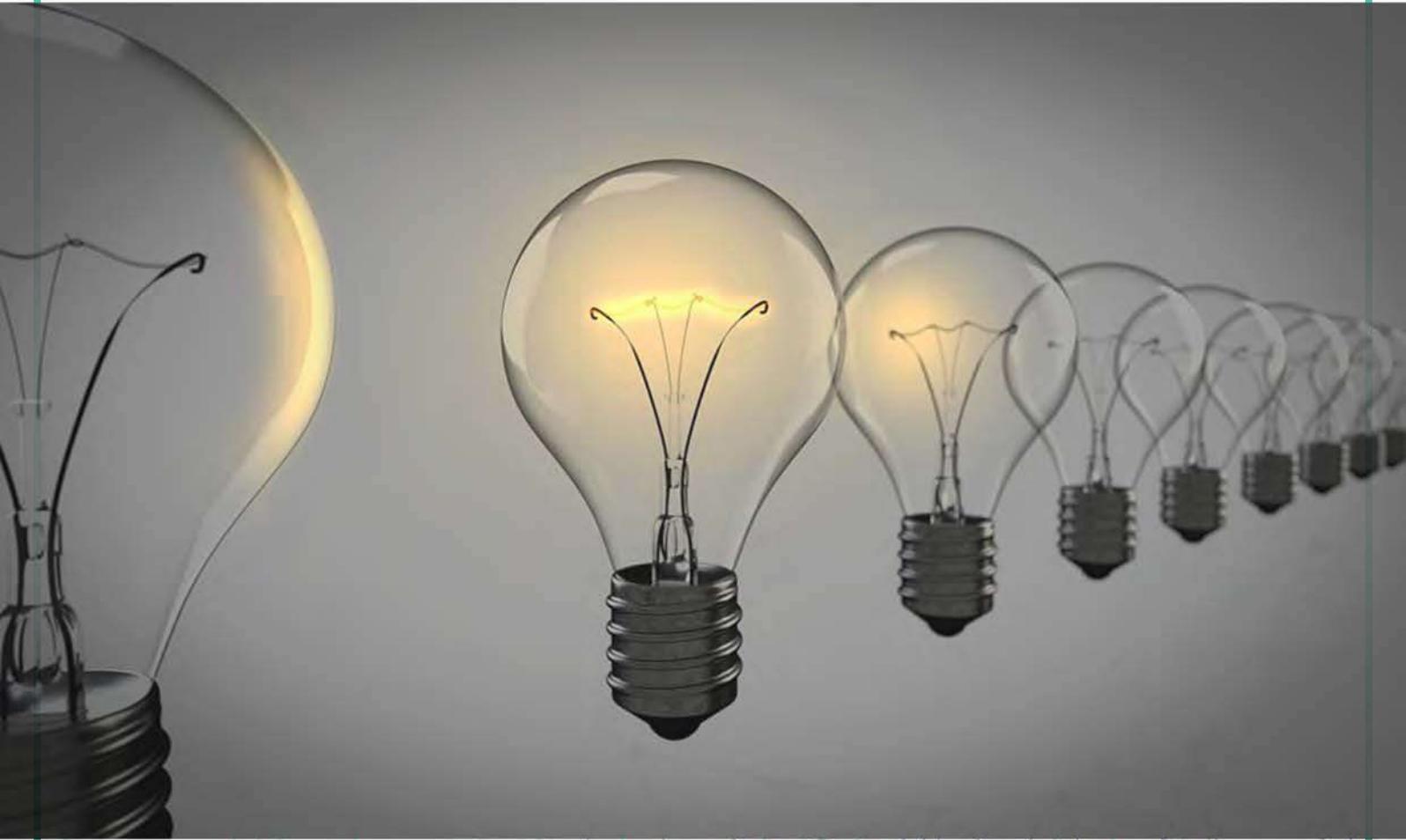
Warranty

Your GivEnergy Battery System will come supplied with a full manufacturers warranty so you can rest assured knowing that our support team are here to ensure that your system will have as little downtime as possible, should any faults or defects occur during its lifespan.

GivEnergy Inverter

5 year standard Warranty

(This can be extended to 10 years upon request from your installer)



GivEnergy Battery Pack

10 year standard warranty or an Energy Throughput of 10MWh per 1kWh stored Capacity, whichever comes first.

Should you have any questions regarding a warranty claim please contact us on the number below and speak to a member of our team.

01377 252 874

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