

# LIVE WEBINAR

## Livoltek on the flexibility of small energy storage systems for solar



**Simon Baggaley**  
Country Manager,  
UK & Ireland  
Livoltek Europe BV



**Daniel Fisher**  
Technical Support  
Engineer, UK & Ireland  
Livoltek



Moderated by

**John Lubbock**  
UK Editor  
Solar Media /  
Solar Power Portal

**LIVOLTEK** **SOLAR  
POWER  
PORTAL**



**5th July 2023**





LIVOLTEK

Power Your Installs with Green Energy

Simon Baggaley  
UK & Ireland Country Manager



## About us

As a member of Hexing Group (est. 1992, 3,000 global employees, listed on Shanghai stock exchange), LIVOLTEK is one of the leading solar product manufacturers and renewable energy solution providers worldwide.

## Our Mission

Making Green Energy Easy and Affordable for Everyone

## Our Vision

Be a Global Leading Provider in Solar Energy Products and Systems





# Global Network - Worldwide Service

LIVOLTEK concentrates on green energy innovation. We are dedicated to giving our customers better quality, more effective, and more enjoyable energy use experiences. With offices and warehouses all over the world, as well as the most experienced local technical team, LIVOLTEK is able to provide our global customers with high-quality solar goods and one-stop energy solutions, as well as faster local delivery and superior local support.





# Quality Control



Production Base



Automated Production



Testing Center

ISO 9001、ISO 14001、ISO45001  
MC Certificate of UK、ULV1741, Certificate of the USA、  
License of Italy, Germany ,France, Brazil, Australia, etc.,  
Environmental Protection Certificate RoHS、  
Global Recycle of Obsolete Solar Module Certificate PVCYCLE

ISO 9001 IEC 62368

IEC 62619 IEC 62109

IEC 61851

DEKRA

LIVOLTRK

CE

Product Certification



# Power Your Installs with Livoltek





# Inverter Series



Single Phase

GT1 1.6~3.3kW

GT1 3.6~6.0kW

GT1 7~10kW



Three Phase

GT3 4~25kW

GT3 30~36kW

GT3 40kW、50kW  
(5-30k LV)

Grid Tied Inverter



Single Phase  
HP1 3~6kW



Three Phase  
HP3 5~30kW

Hybrid Inverter



GF1  
1K524L1/3K24S1/3K48L1/  
3K48S1/5K48S1/6K48S1

Off-grid Inverter



# Battery Series



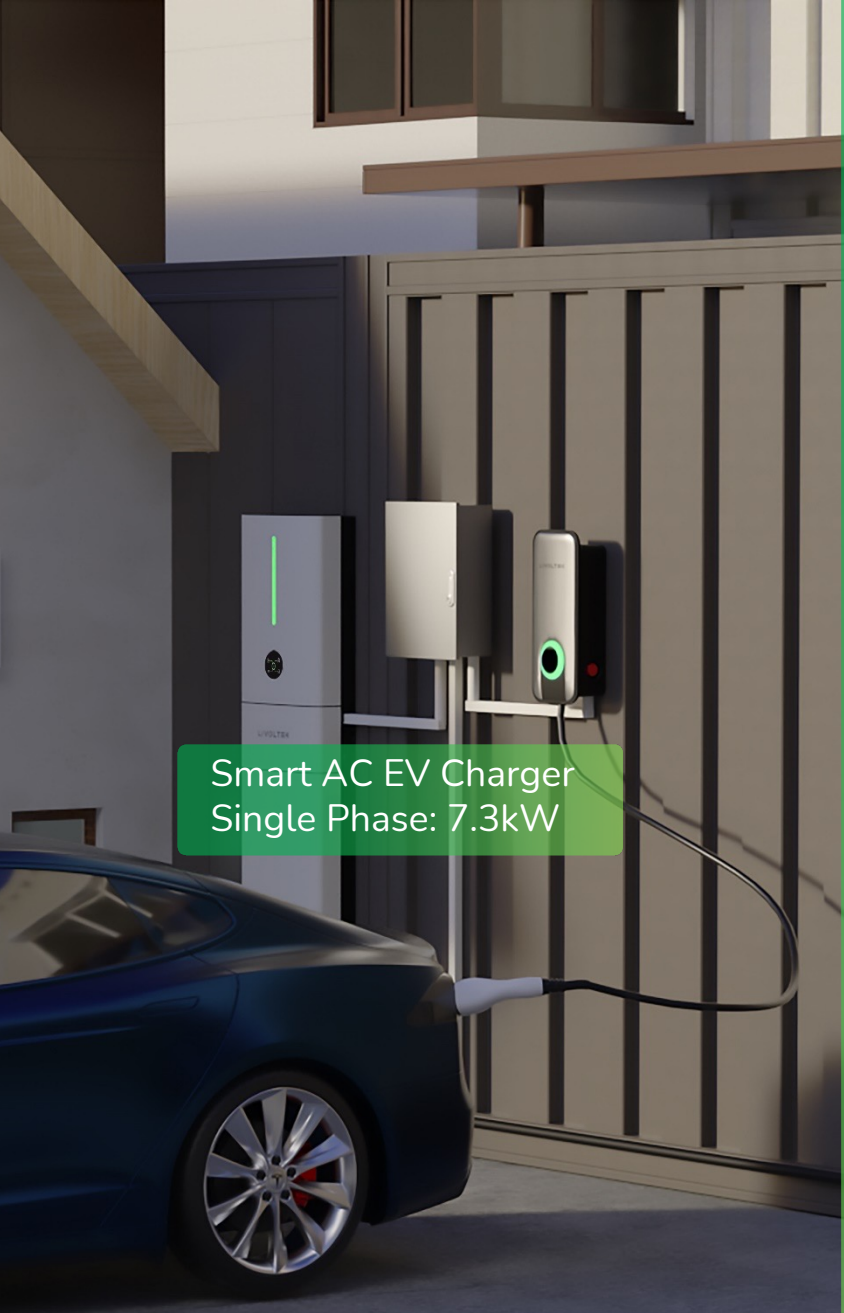
LV: 5 – 25 kWh

HV: 10– 30 kWh

Large capacity with safer & smaller design

Energy independence, allowing worry-free usage of electricity anytime you want

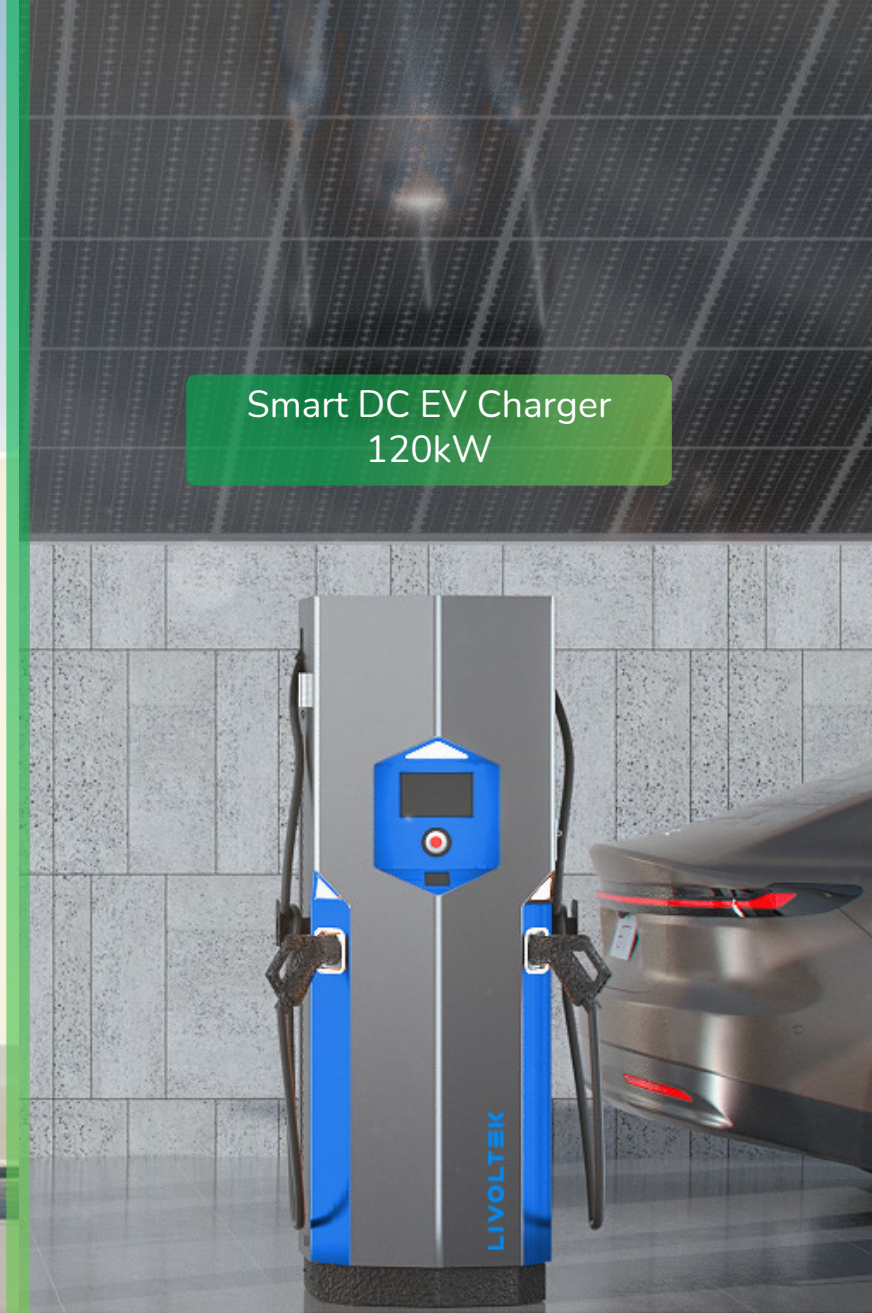




Smart AC EV Charger  
Single Phase: 7.3kW



Smart AC EV Charger  
Three Phase: 22kW



Smart DC EV Charger  
120kW

## Smart EV Charger



# Feedback from the UK & Ireland solar market, part 1 – pre install

## Installers tell us....

I need features and benefits to help sell the system

It can be difficult to find a good location for the inverter and the batteries

A good warranty gives the customer peace of mind and helps me sell the system

I need simple, fast installs to minimize time onsite on install day

## End users tell us....

I don't want inverters or batteries in the house – I'm worried about noise and heat. It will take up too much space and it looks industrial

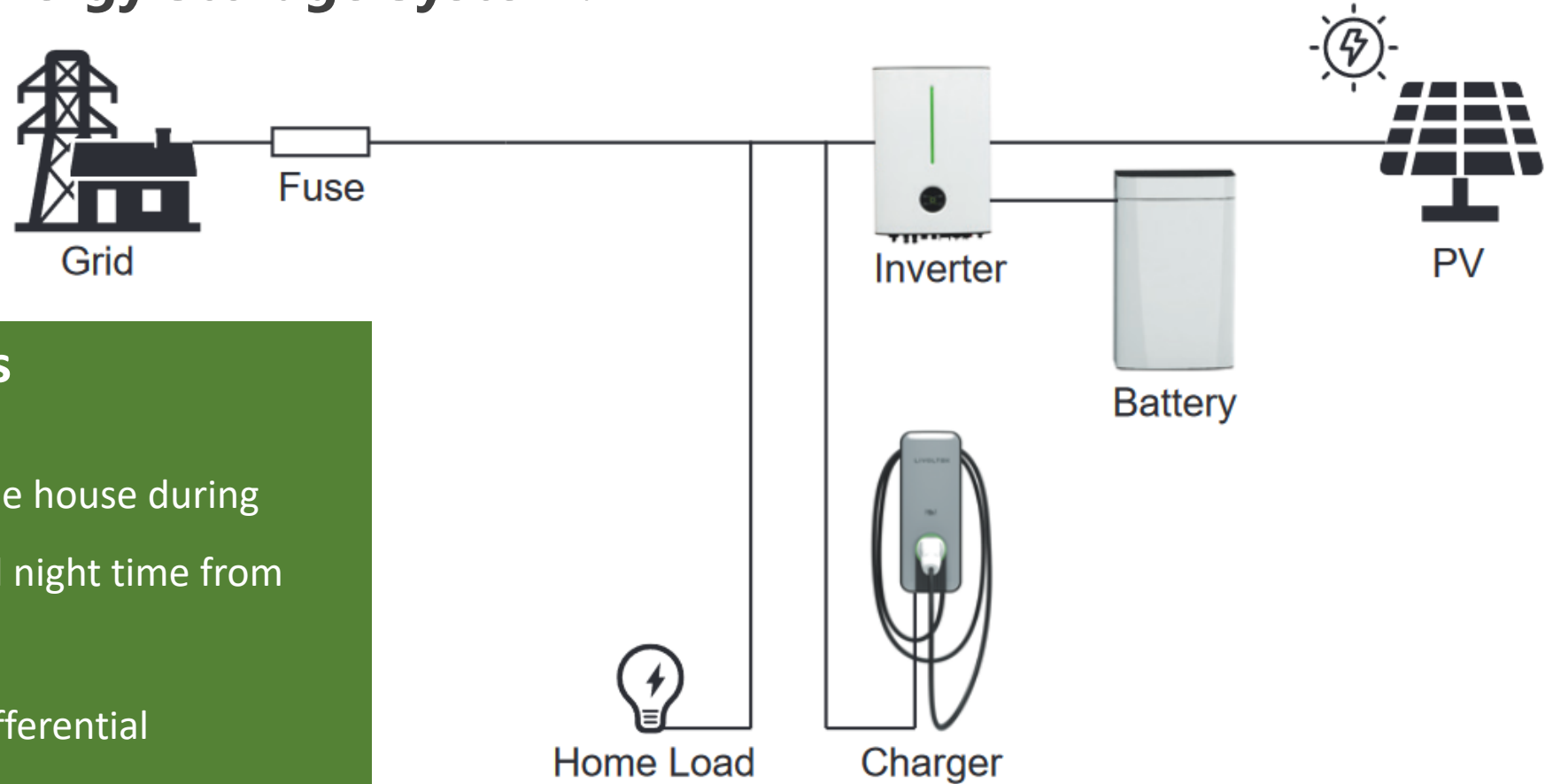
I want grid independence from my investment in my own generation and storage – if there is a power cut I want the lights, the freezer and the wi-fi to stay on

I want battery storage but I don't know how much capacity I need

I need to be able to control my system to take advantage of cheap night rate electricity and other complex tariffs



## What is a Hybrid Energy Storage System?



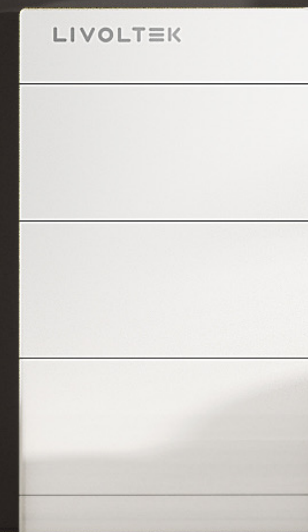
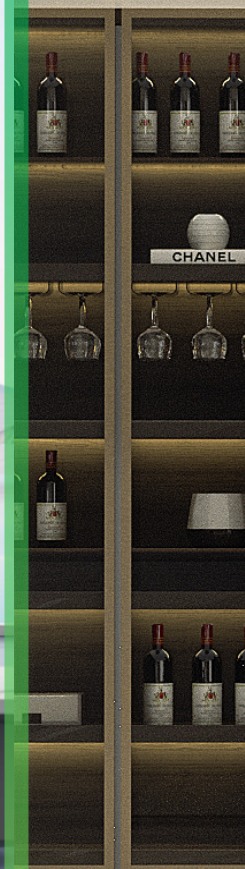
### Hybrid System Advantages

1. Supplying renewable power to the house during daylight from solar generation, and night time from battery storage
2. Saving bills via electricity tariff differential
3. Supplies electricity to home in a power cut





Single Phase Energy Storage System (All-in-one)



Three Phase Energy Storage System



# Energy Storage System



# The All in One Energy Storage System



## Hyper Series Hybrid Inverter

*Compatible with 3 – 7.5 kWp  
DC PV systems up to 2 arrays*

- 3 kWp single MPPT
- 3.68 kWp dual MPPT
- 5 kWp dual MPPT



## BLF51-5 LV Battery

- 5.12 kWh per battery
- Built in Battery Management System (BMS)
- Modular connection of up to 5 batteries to give 25 kWh



→ Inverter

→ Middle cover kit

→ Battery



# Key Benefits Hybrid Inverter

150%

150% DC/AC Ratio enables more solar power to be utilised by house and stored in batteries



Smart design – compact & slim, plug & play – all connectors in box

EPS

Emergency Power Supply – seamlessly switch selected circuits to back up power from battery/solar in a power cut



Easy commissioning – set up homeowner in advance – scan QR code on site to add device to app.



Natural cooling, low noise operation

SPD

Built-in \***SPD III** (Surge Protection Device) AC and DC type three lightning protection device to reduce wiring and labour costs

IP65

IP65 water-and-dust proof - install outdoors

10

10 year warranty





## Key Benefits Battery

LFP

Lithium Ion Phosphate cells for safety, long lifespan and wider operating temperature

100a

100 amp discharge current means a usable 4.5 kW from the battery

BMS

Smart design plug & play – built in BMS and top cover included



User defined modes for battery optimization

5-25  
kWh

Modular battery system. Plug and play future upgrades.



Protections: Over/Under voltage, Over Current, Short Circuit, Over Temp. Built-in DC Isolator to reduce wire and labor costs.

IP65

IP65 water-and-dust proof - install outdoors

10  
(6000)

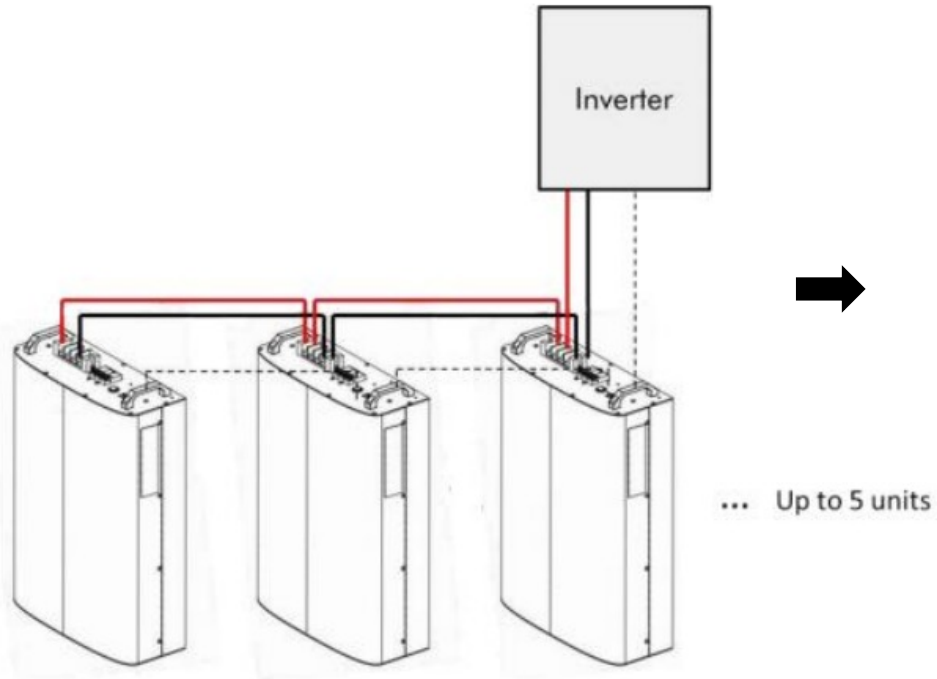
10 year, 6000 cycle warranty at 90% Depth of Discharge







# Battery Extension



Expand your system capacity as the demand grows  
Battery can be paralleled up to 5 pcs (5\*5kWh)





# Installation examples

Install Outdoors



Install Side by Side or Vertical



All in One 5kW inverter/10 kWh battery



All in One 5kW inverter/15 kWh battery

Install in Small Spaces





# Livolttek Smart Energy Management System



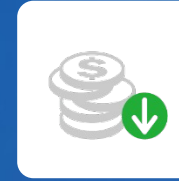
View All Home  
Power Flows



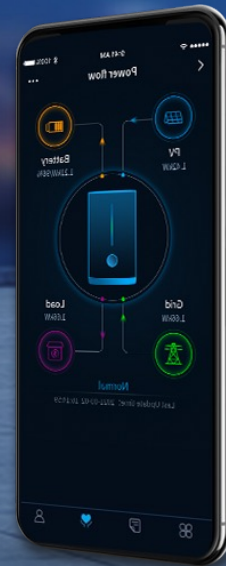
Track Your Home  
Generation & Consumption



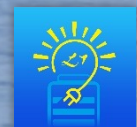
Intelligent EV  
Charging Schedules



Minimise Your  
Grid Import Costs



"Livolttek" Website



"My Livolttek" APP



# Problems solved....

## Installers told us....

I need features and benefits to help sell the system



It can be difficult to find a good location for the inverter and the batteries



A good warranty gives me peace of mind as well as my customer



I need simple, fast installs to minimize time onsite on install day



## End users told us....

I don't want inverters or batteries in the house – I'm worried about noise and heat. It will take up too much space and it looks industrial



I want grid independence from my investment in my own generation and storage – if there is a power cut I want the lights, the freezer and the wi-fi to stay on



I want battery storage but I don't know how much capacity I need



I need the output from the battery to actually power the kettle





# Where to Buy

## Distributors

<https://livoltek.com/contact/where-to-buy/>



UK



UK



UK



UK



UK



Ireland



UK & Ireland

## Approved Installer Scheme

<https://livoltek.com/installer-free-training/>

## Homeowners

Contact us for details of Approved Installers in your area

<https://livoltek.com/contact/contact-us/>



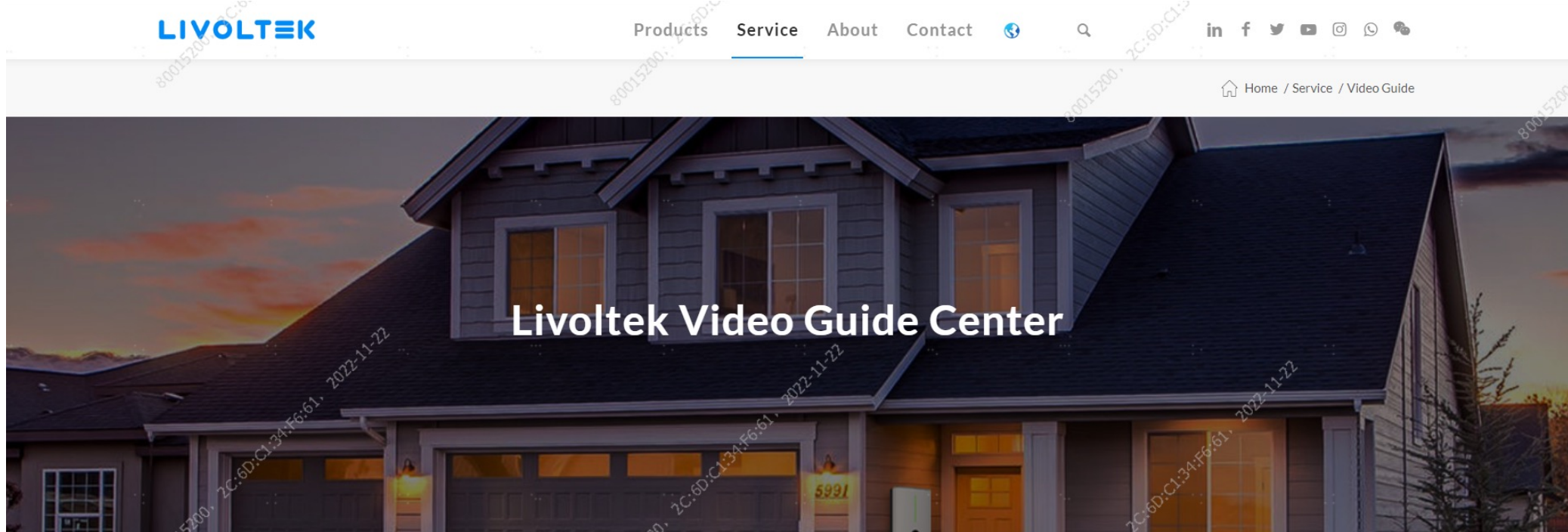
**Dan Fisher**



**UK& Ireland Technical Support**



# Installation guidance — installation guidance video



Find Your Answer Faster

[https://www.youtube.com/watch?v=BfYk  
BxWiW4k](https://www.youtube.com/watch?v=BfYkBxWiW4k)



Click the link to jump to the web page



# Feedback from the UK & Ireland solar market, part 2 – post install

## Installers tell us....

I need commissioning and customer handover to be simple and easy for the customer to understand

I need support on the end of the phone when I'm on site

I want to know about problems on site before my customer reports it

Returning to site to address issues affects my profitability

## End users tell us....

I want my solar. Storage and EV charger to be controlled in the same app

I need to be able to control my system to take advantage of cheap night rate electricity and other complex tariffs

I need peace of mind that my system is covered by a good warranty

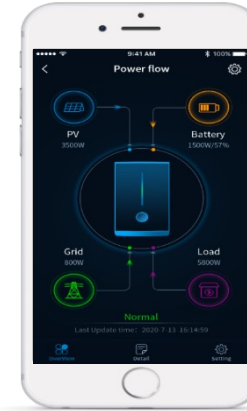
I need to be able to easily see how my system is performing and how much I am saving





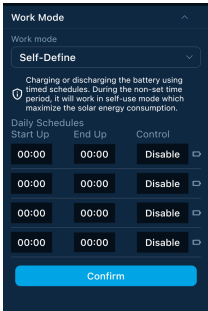
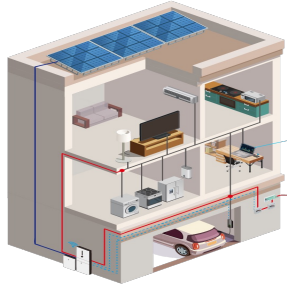
# APP & MONITORING

- 01 | Visualization of PV production and self-consumption, energy balance or the state of charge of energy storage
- 02 | Certified data security and redundant data storage over the product lifecycle
- 03 | Easy access from a computer, smartphone, or tablet
- 04 | Effective management and improved O&M capabilities:
  - ✓ Installer level overview of all end user systems
  - ✓ Automatic alerts on system issues – spot problems before end user, without having to check system every day
  - ✓ Remote troubleshooting and access to real-time system data and guided root-cause fault analysis
  - ✓ Remote settings changes, firmware upgrades, and system reboots





## Work Modes for homeowners



### Self-Use Mode (default mode)

- Maximises use of renewable energy, minimize grid import
- Hierarchy of power consumption
- Priority order: (1) use solar power in house (2) charge battery (3) discharge battery when no solar (4) export only when battery full (5) import from grid

### Self-Define

- Charge on cheap tariff rates
- Discharge for home usage when tariffs are expensive
- Disable (hold charge) when you want to keep your battery full (eg. save it for your EV charger at certain time of day)

### Backup Mode

Prioritise battery charge: ensures battery will have enough energy to supply load when the grid is disabled

### EV Modes

- Fast Charge – charges car battery as fast as possible from any power available
- Eco – only uses solar or battery power to charge EV
- Self define – user defines times of day to charge



# Support and warranty

- 10 year product warranty for Hyper Series Inverters
- 10 year product warranty for Livoltek Batteries
- Swap and replace basis for approved RMAs

## **Class Leading Battery Performance Warranty:**

- 70% performance level guaranteed for 10 years or 6,000 cycles at 90% DoD

## **UK based technical support team**

- UK based telephone and field support
- Pro-active monitoring and upgrade of install base
- Installation Training for new installers

TEL(Service)tel: | [+44 20 4571 0664](tel:+442045710664)  
EMAIL(Service) | [service.eu@livoltek.com](mailto:service.eu@livoltek.com)



Backed by Global Technical Support and Training Services Team

# Problems Solved...

## Installers tell us....

I need commissioning and customer handover to be simple and easy for the customer to understand



I need support on the end of the phone when I'm on site



I want to know about problems on site before my customer reports it



Returning to site to address issues affects my profitability



## End users tell us....

I want my solar. Storage and EV charger to be controlled in the same app



I need to be able to control my system to take advantage of cheap night rate electricity and other complex tariffs




I need peace of mind that my system is covered by a good warranty



I need to be able to easily see how my system is performing and how much I am saving





An aerial photograph of a rural farm at sunrise or sunset. The scene is bathed in a warm, golden light. In the center, a large white barn has a section of its roof covered with solar panels. To the left of the barn is a red building, and further left is a white house. The farm is surrounded by lush green fields, some with wooden fences, and dense trees. In the background, rolling hills are visible under a hazy sky.

# Q & A

# LIVOLTEK



[www.livoltek.com](http://www.livoltek.com)



[Sales.eu@livoltek.com](mailto:Sales.eu@livoltek.com)



+44 7597 587947  
(Tel/WhatsApp)



Livoltek UK & Ireland, 1 Holloway Head, Birmingham, UK B1 1HP