## Solar Energy Solutions

# FOR YOUR HOME & BUSINESS

Solar Solutions



Battery Storage



Home Heating



Car Charging











About Us

Saving money on your energy bill starts here, with one of Yorkshires most innovatitve and progressive energy businesses, Solar Max Yorkshire Limited. Offering the complete turn-key service from household energy assessment, recommendations and implementation with a holistic approach to the solutions which are best suited to meet your lifestyle energy requirements.

#### Content



Solar Pannels Pages 4 - 7 Our home solar systems have been developed and commissioned with the highest standards, quality manufacturing and installed by fully qualified electricians.



Home Solutions
Pages 8 - 9

Solar Max is a business that thrives on providing a complete home solution to revolutionise your enegy useage, adding value and future proofing your home.



Battery Storage Pages 8 - 9 We work with world class suppliers to source the most reliable battery storage solutions available.



Home Heating
Pages 10 - 11

Infrared home heating when paired with solar is a completely green home heating energy answer. Panels are UK manufactured and fully tested in the UK to British Standards



Electric Car Charging
Page 12

Our electric car charging has been especially designed to include eco charging modes which enables you to use your own generated electricity to supply the car charging facility.



iBoost System Page 13 The solar iBoost diverts your excess solar electricity to heat your water via your existing immersion heater element, reducing your water heating bill and utilising further the solar electricity your system produces.

Carbon footprints estimate the total amount of greenhouse gases emitted during our daily lives. By investing in energy saving home solutions you are joining the green revolution and helping to do your part by reducing the impact of emmisions assosiated with day to day living. The average 4kW Solar System will save 900kg of carbon per year with a carbon pay back of 1.5 years.



## Solar Panels

Utilizing the best of technology, in a typical grade A panel, can generate over 400 watts of electrical power per hour when the suns brightest light hits the system, but even in shade todays solar panels can still generate acceptable levels of electrical power.





A 10-panel solar roof system can generate 4kW of power. The amount of electricity produced annually is determined by the orientation of the system (i.e. which way the panels face), if there is any shading and how sunny the location is. All important factors when determining the location of your Solar System. Modern systems can now produce accepted levels of performance on east/ west roofs.

#### **Customer Testimonial**

"We are really pleased with our Solar Panel System and watching our energy bills drop dramatically! Solar Max installed the system quickly and effectively and with little disruption to our household. Great Job!"

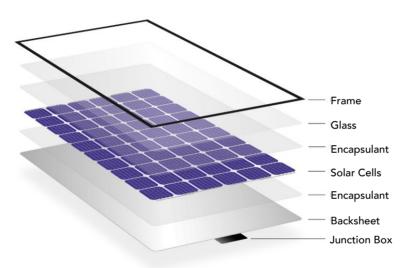


#### Why Solar Max is your supplier of choice

Bespoke roof design

- Grade A Solar Panels
  - Hassel Free Installation



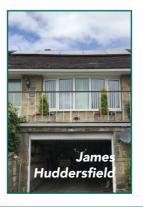


Our assessor will advise you on the panel type most suitable for your solar system. We always recommend using Grade A panels which provide the best in performance and low degradation figures and carry a 20 year manufacturer backed warranty.

The roof system mounts are manufactured from aluminium and zinc alloys with a 50 year life expectancy. The mounting frame systems have the option of being fully integrated or mounted above exsiting roof tiles.

#### **Customer Testimonial**

"I had a huge unexplained electric bill despite installing a full ground source system only a year ago. Solar Max installed an east/west system and 5 Kilowatt battery. I now have many days with zero electric costs."



#### **Customer Testimonial**

"Great service, Solar Max installed the solar panels on my garage roof, keeping me up to date with the install progress. I am now watching my daily energy use reduce and have ordered a 5 Kilowatt battery to store my surplus energy."



#### **Roofing Applications**

The technology for solar roof mounting systems has advanced where today aluminium roofing mounting systems are designed to take any roof style or pitch with innovative designed clipping systems that are manufactured to the highest quality standards giving reassurance through all weather conditions.

#### Pitched roof

There are many types of pitched roof, each with their own specific requirements for a secure attachment. Strong but light weight roofing attachement systems are designed to work with all variation of roofing finish from slate to concrete tiles as well as corrugated roofs and the steel roof sandwich





#### Intergrated roof

Some people find solar panels to be less than aesthetically pleasing, our solution to this is to use our concealed solar roofing panel mounting system, which intergrates the solar panels into the existing roof of the building unlike the standard solar installation which sits on top.

#### Flat roof

We offer an assortment of flat roof systems taking roof construction and wind loads into consideration. Our simple flat roof mounting systems are designed to sit on the roof without the need to cut through or penetrate the exisiting waterproof membrane.



#### Installation Process



The first part of our process is to complete an initial site visit as no two roofs are alike. We need to consider factors such as orientation to the sun, shading from trees, building and other objects and well as type and age of the roof. The initial anaylsis also considers the household energy consumption and lifestyle to help choose the right solution. Our on-site assessor will evaluate all of these factors when producing your free property report.





Following the assessment, the information is passed to our design team who specify the most suitable roof system and panel specification, all designed to optimise the systems performance. We will then make a full recommendation and free quote for your consideration. This will include government backed performance figures and anticipated savings.





Once you place your order with Solar Max, your system will be reserved with our distribution partner, ready for us to collect as a complete system.





We will instruct our scaffolding and roofing team to allocate a date for your panel installation of either a roof mounting, intergrated roof or flat roof system.





With the panels installed and generating power our electrical partners will fit the inverter to connect the electricity generated to the home energy supply. At this stage the team will also fit any other products you have purchased such as batteries, EV chargers, the iBoost systems for water heating or other energy saving devices.





Once connection is completed our electrical contractor will sign off the system and advise the local grid that the system has been installed. Should the system required be greater than 4kW we will work with you to get the local electric grid approval required, known as a DNO application.



#### **Home Solutions**

#### **Power Generation**

Modern technology has allowed a drive towards micro-generation .The costs of micro-generation have dropped dramatically whilst the output capabilities and performance have increased significantly in recent years.

#### **Battery Storage**

An efficient way to utilize the energy you have produced is to use it yourself, when the wind doesn't blow and the sun doesn't shine, the solution is to use your stored electricity from your batteries.

#### **Energy Management**

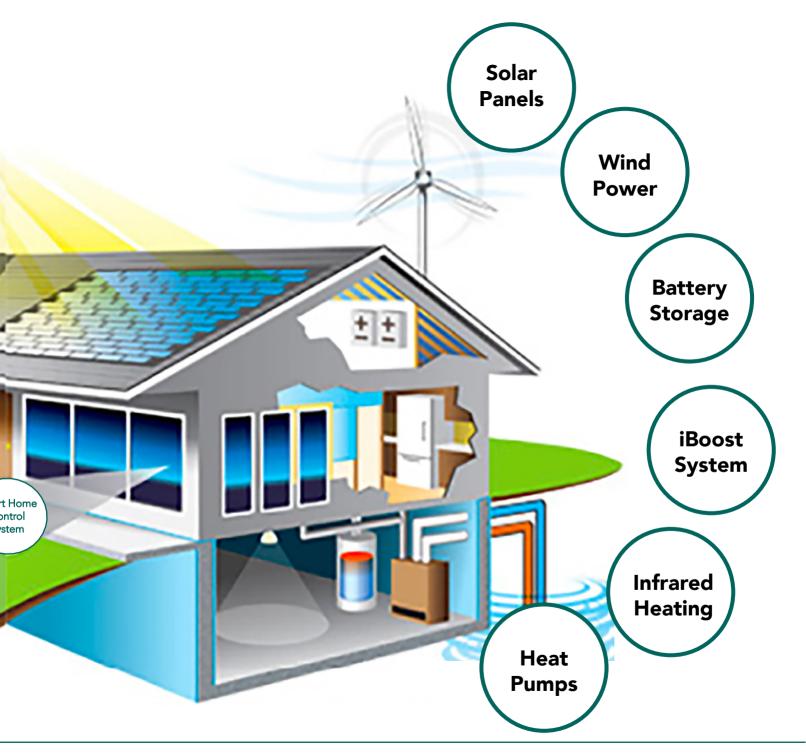
At some point you will need to draw some energy from the national grid, there are some simple inexpensive technologies which enable you to do this more efficiently. A smart home managment systems, voltage optimisers are just two examples of home energy saving solutions.

Smart Ho Contro

System

#### **Home Heating**

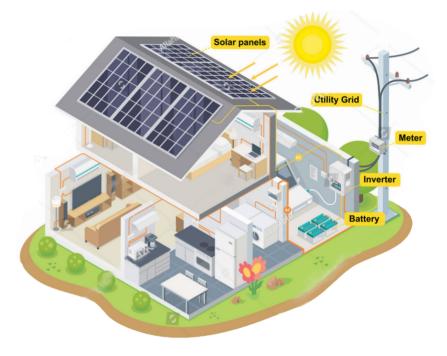
Within the UK the biggest part of your energy consumption is in heating both the internal living space and water. Combined it equates to 75-80% of your energy consumption. Any savings in this area can have significant reductions in your bill. Ideally using the energy you are generating in the first instance.

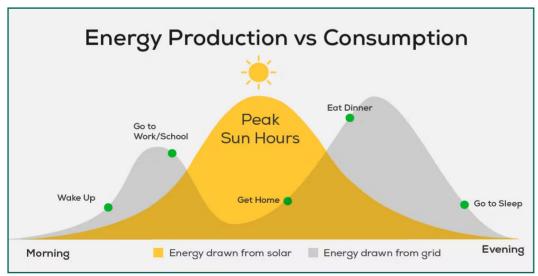


### **B**atteries

Adding battery storage to your solar panel or microgeneration system enables you to store the energy. You can then use it when your systems aren't producing as much or demand is higher than is being produced.

The most effective and economical way to utilise your own generated electrical power is to use it yourself. Using grid energy is typically around 29p per kWh (summer 2022), and with further increases on the way, selling your surplus supply back to the national grid only yields a return of between 3p to 7.5p per kWh, making it much more effective to use the energy you produce.





As energy production fluctuates throughout the day, batteries are the ideal solution. Charged up when the sun is at its peak or the household isn't using all the energy produced. They are able to supply the energy that has been produced at the time of day when you need it.

#### **Our Range**

Alpha Batteries in most instances. They are one of the worlds leading specalist storage battery producers dealing in over 80 countries world wide.

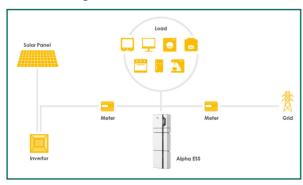
Manufacturing for both domestic and commerical battery storage, up to 100kWh per system. They have over 75,000 installations operating across the world in 2022.

#### Alpha ESS - Smile B3 System

Offering a fast responsive and uninterupted power supply. The 5 Kilowatt single phase hybrid inverter features an intelligent modular design with 24/7 monitoring both online and via the Alpha ESS app. The systems start with either a 2.9kW or 5.0kW battery and smart inverter system, but the system can then incoporate additional storage at a later stage with the purchase of an additional battery capacity, in 2.9kW or 5kW lithium battery units, which are simple and easy to install, potentially taking your domestic system upto 30kW.



#### How the system works







### Home Heating



The Infrared Advantage

- Slim stylish wall mount.
- ✓ Quick easy install.
- No moving parts, giving completely silent running.
- Superior warmth, by heating objects and walls not just the air.
- ✓ Compatible with many off the shelf control systems such as Salas or Lightwave
- Totally remotely controlled via mobile app or by the heater room settings.
- √ 5 year factory and insurance backed guarantee.

Space heating is dependent on levels of insulation, draft properties and external temperature for energy usage.

A complete range of infrared radiant heating offers the latest in modern space heating, ideal for the home environment. There is increasing market awareness of the benefits and superior levels of comfort that infrared radiant heating offers with guicker control response times.

The heating can run off electricity from renewable sources such as solar PV and have no maintenance requirements, saving on annual services costs. The range of infrared heating panels are compatible with thermostats and motion sensors ensuring you only pay for the heating that you need.

#### How it works

Convection heat is constantly battling the air in the room, and the best way to combat this is to insulate the space, closing doors and when ever possible windows.

The heating relies on the circulation of warm air, varying the temperature in the room as heated air rises to the ceiling as heavy cold air sinks to the floor.

The energy produced from Infrared heating panels is more responsive and there allows for greater controlability, heating objects and walls to radiate the heat out and heat the room.

Convection



infrared



#### **Our Range**



With over 50 years manufacturing experience from the Todmorden production site, the Infrared Heating Division has been established to take full advantage of the opportunity to manufacture a home heating panel here in the UK. Producing a range of Aluminium Panel Infrared Radiant Heaters which are stylish satin white, slim and manufactured in light weight aluminium.



IR350 – Made from premium components, the Aluminium panels are designed for either wall or ceiling installations to cover rooms up to 7 sq/mtrs.



IR800 – The most popular size of heater in the range covering from 8-12 sq/mtres of space with a neat satin finish that blends unobtrusively into the room.



# **Electric Car Charging**

Electric car charging has special eco charging modes which will benefit homeowners with solar generation. Charging current is automatically and continually adjusted in response to on-site generation and household power consumption. In FAST charge mode, our electric home car charger operates like an ordinary EV charging station.

Zappi works like any regular charging point but has special eco charging modes which will benefit homeowners with grid-tied microgeneration systems.

The ECO+ charging mode will automatically adjust the charging rate to only make use of surplus power that would otherwise be exported from the property - which means that charging your car is effectively, has the potential to be totally free!

### EV Charging Advantage

- ✓ EV Charging from your properties solar generation
- ✓ Simple and easy to install
- Dynamic load balancing for maximum installation flexibility
- ✓ Advanced intergral safety features
- ✓ Accrediated performance





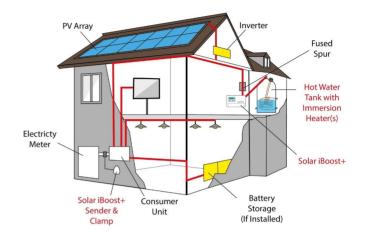
Simple but clever, the solar iBoost diverts your excess solar electricity to heat your water via your existing immersion heater element.

Many domestic solar PV systems will generate more energy during the day than is used. This surplus energy is usually sent to the National Grid automatically so you may not even be aware that it's going on.

The Solar iBoost+ interrupts this process, enabling you to use more of your free solar energy while you have it and reducing the amount you need to buy.

### The iBoost Advantage

- Simple to install
- Maximising the use of the free solar energy generated at your property
- Cutting the cost of heating your water
- ✓ Reduced use of your boiler
- ✓ Programmable timer









Solar Max Yorkshire Limited
Hub 26
Cleckheaton
West Yorkshire
BD19 4LN