

CUSTOMER EDUCATION

The Home Renewable Energy Guide

A practical introduction to solar PV, battery storage, heat pumps, EV charging and coordinated whole-home energy planning.

Independent advice	Coordinated delivery	Long-term value
Options explained around your property, usage and objectives.	Qualified installation partners selected for the project.	Design decisions focused on performance, usability and aftercare.

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Understanding your options

Renewable energy works best when technologies are selected as part of one coordinated plan. A property may benefit from solar PV alone, or from an integrated combination of solar, battery storage, a heat pump and EV charging.

- Start with actual annual electricity and heating use.
- Consider future changes such as an EV, extension or home working.
- Review roof condition, orientation, shading and available plant space.
- Compare upfront cost, finance, running cost and long-term flexibility.

The objective is not to fit the most equipment. It is to specify the right system for the property.

Solar PV

Solar panels convert daylight into electricity for use in the property. Generation varies with system size, roof orientation, shading, location and season.

- Use more solar electricity directly by timing appliances during daylight hours.
- Store surplus energy in a battery where the usage profile supports it.
- Export unused electricity through an eligible export tariff.
- Allow for roof access, scaffolding, electrical work and grid requirements.

Battery storage

A battery can store surplus solar generation or lower-cost electricity for later use. It can improve self-consumption and help shift demand away from peak tariff periods.

- Battery capacity should match the customer's consumption pattern.
- Not every system provides backup power during a grid outage.
- AC-coupled and hybrid configurations suit different retrofit and new-system situations.
- Location, operating temperature, warranty and usable capacity matter.

Air source heat pumps

A heat pump transfers heat from outside air into the home. Correct design depends on heat loss, emitters, flow temperatures, hot-water demand and controls.

- A room-by-room heat-loss assessment is central to design.
- Radiators or other emitters may need review or upgrading.
- Cylinder size should reflect household hot-water requirements.
- Outdoor-unit location must consider airflow, pipe runs, access and noise.

All-in-one home energy planning

A coordinated project can consider how generation, storage, heating, tariffs and transport work together.

- Solar can support daytime electrical demand.
- A battery can shift solar or off-peak electricity into higher-cost periods.
- A heat pump changes the home's electricity profile and should be included in system modelling.
- An EV charger can be scheduled around solar generation and tariffs.

One survey pathway. One coordinated plan. Technologies designed to work together.

Survey and design checklist

- Current and expected annual electricity use.
- Heating fuel, annual heating use and existing system condition.
- Roof orientation, pitch, shading, structure and available space.
- Electrical supply, consumer unit and potential grid application.
- Heat loss, radiators, cylinder and outdoor-unit location.
- Planning, access, scaffolding and installation constraints.
- Product warranties, monitoring, handover and aftercare.

Common questions

Will solar work on an east- or west-facing roof? Often yes, subject to assessment. Do batteries work without solar? They can, particularly with suitable time-of-use tariffs. Will a heat pump work in an older property? Many can, but design and fabric condition must be assessed.

- Indicative online figures are not a substitute for a formal design.
- Grant and tax rules can change and eligibility must be checked.
- Performance varies by property, behaviour, weather and tariff.

Next step

Send your postcode, recent energy information and a short description of the project. We can then arrange an initial assessment and explain the most useful next stage.

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