



# GREEN ENERGY GUIDE

Your Guide To A Greener Home; Heat Pumps,  
Solar Energy & Sustainable Savings



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# An Introduction To Green Energy!

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Green energy comes from renewable sources like sunlight, wind, geothermal heat, and water, which are naturally replenished. Unlike fossil fuels, it does not produce harmful greenhouse gas emissions or pollution. As climate change becomes more urgent, switching to renewable energy is essential for both national and global needs.

Renewable technologies such as solar panels and battery storage are becoming more accessible and cost-effective. When paired with energy-saving improvements like insulation and double glazing, these systems can significantly reduce energy bills and carbon footprints while making homes warmer and more efficient.

The UK government has begun encouraging homeowners to switch to renewable energy in order to achieve net-zero carbon emissions by 2050. Grants are available for low-carbon heating systems like air source heat pumps to help households transition from gas and oil boilers.



# Why Go Green?

Switching to green energy isn't just good for the planet. It's good for your wallet, your home, and your future

## ENERGY SECURITY & INDEPENDENCE

Avoid future price hikes and supply instability by relying more on your own renewable systems.

## INCREASED PROPERTY VALUE

Homes with energy-efficient upgrades are often more attractive to buyers and command higher prices.

## GOVERNMENT INCENTIVES & FINANCING

Programs like the Boiler Upgrade Scheme and Smart Export Guarantee (SEG) can reduce upfront costs and reward you for generating clean energy.

## LOWER ENERGY BILLS

By generating your own electricity or heating, you reduce dependence on the grid and save money over time.

## REDUCED CARBON FOOTPRINT

The average UK home emits over 2.7 tonnes of CO<sub>2</sub> annually through heating alone. Green energy systems dramatically reduce these emissions.



Energy-independent homes can save up to 70% on annual energy bills compared to conventional households!

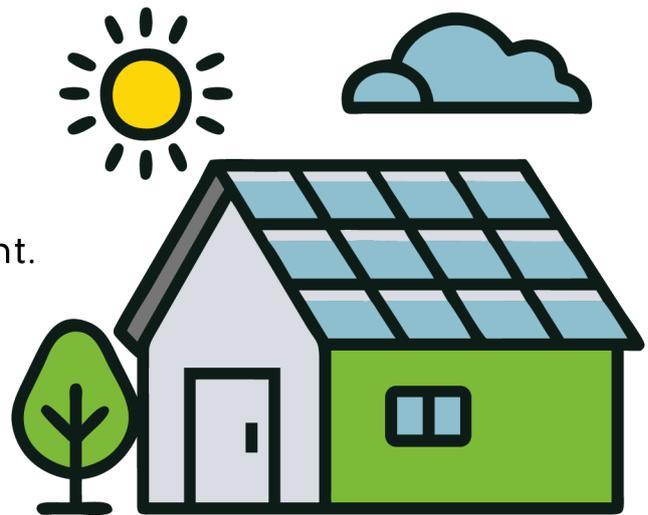
# Understanding The Benefits of Solar PV

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Solar PV systems harness sunlight and convert it into electricity using photovoltaic cells, typically installed on rooftops. Having Solar PV reduces dependence on the grid, significantly lowering your household's overall emissions & providing access to energy during peak rates or outages.

## How It Works

- ➔ Panels generate direct current (DC) from sunlight.
- ➔ An inverter converts DC to alternating current (AC), which your home can use.
- ➔ Excess electricity can be stored in batteries or exported to the grid.



Installing solar panels is one of the most effective ways to reduce your reliance on the grid and cut your electricity bills. But did you know the benefits of solar PV go even further when combined with other renewable technologies in your home?

By pairing solar panels with systems like air source heat pumps, home battery storage, and energy-efficient insulation, you create a fully integrated, low-carbon home energy system.

# Understanding Heat Pumps

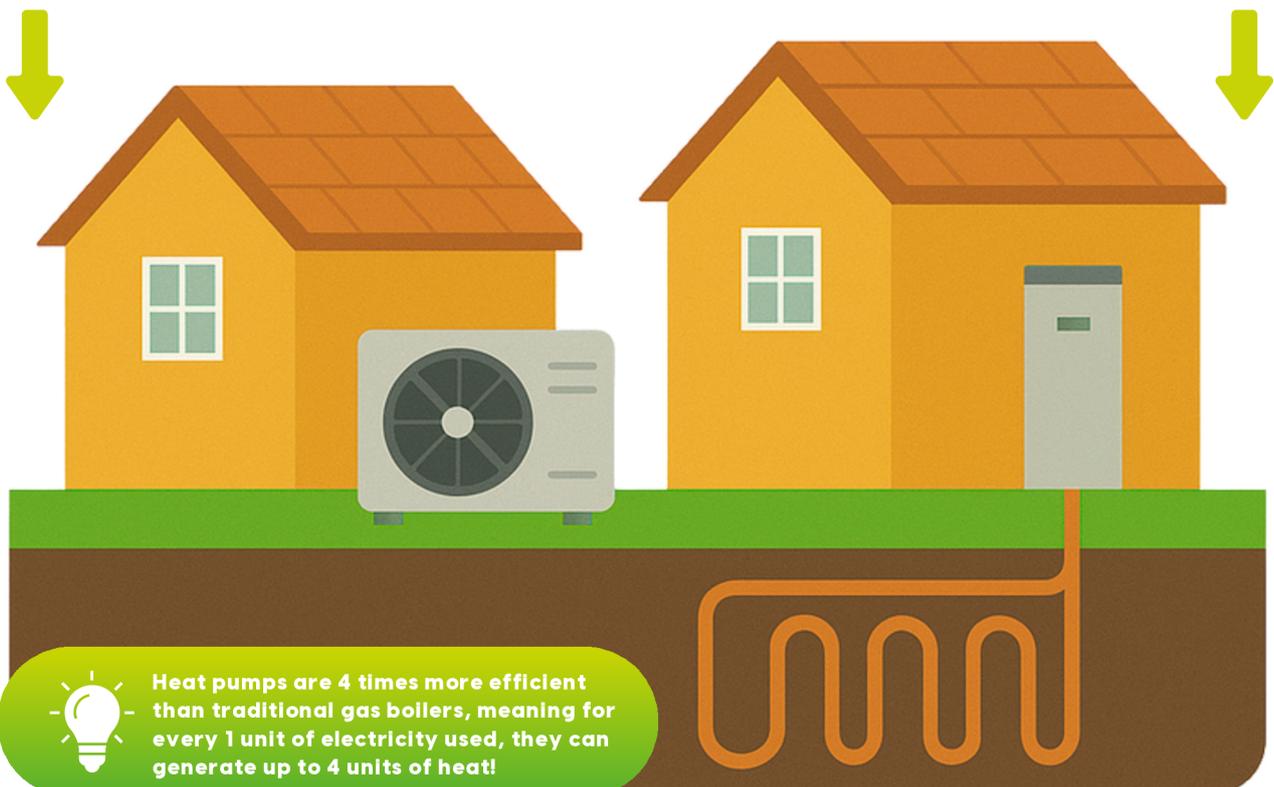
Heat pumps transfer heat from the outside air or ground into your home instead of generating heat by burning fuel, making them significantly more efficient. The UK government is currently promoting the adoption of heat pumps in homes by offering up to **£7,500** through their Boiler Upgrade Scheme. So if you were thinking of making the switch, now is the time!

## Air Source Heat Pumps (ASHP)

Extract heat from the air, even in cold weather. Ideal for most UK homes.

## Ground Source Heat Pumps (GSHP)

Draw heat from underground pipes buried in your garden or a borehole. Efficient but requires more space.



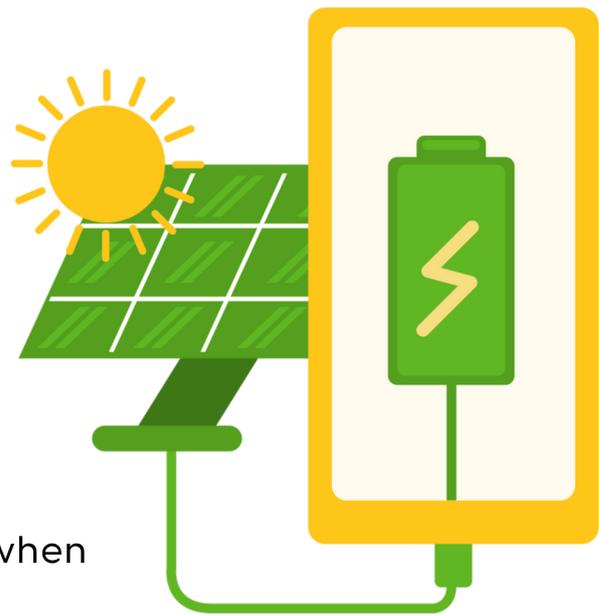
# Home Battery Storage

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A home battery system allows you to store surplus solar electricity generated during the day for use at night or during outages.

## How It Works

- ➔ Connects to your solar PV system.
- ➔ Charges during daylight when solar output exceeds home demand.
- ➔ Discharges stored power when needed.

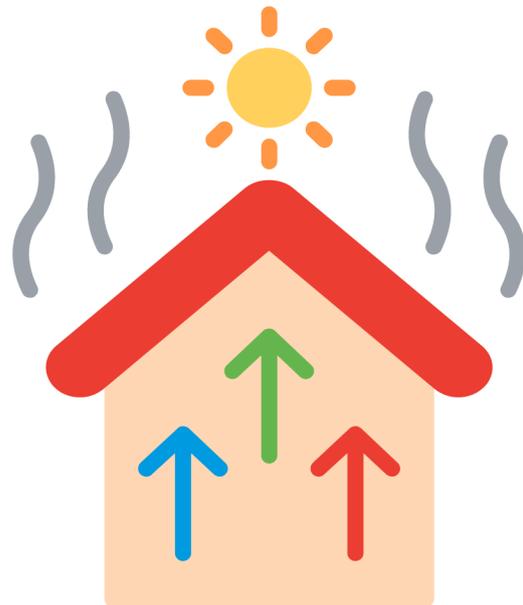


Home battery storage systems are gaining popularity among homeowners looking to reduce dependence on the national grid and maximize renewable energy use. By storing excess electricity from solar panels during the day, these batteries enable energy usage later in the evening or during power outages, fostering greater energy independence. They also provide value when paired with time-of-use tariffs by storing cheaper electricity for later use.

Although installation costs are currently high, they are decreasing, and most systems last about 10 to 15 years, making them a solid long-term investment in a low-carbon, energy-independent home.

# Insulation & Window Upgrades

To get the most out of renewable energy systems, it's crucial to ensure that your home retains heat efficiently. Even the most advanced technologies, such as heat pumps and solar panels, will not perform well in a poorly insulated property.



Without proper insulation, a significant amount of the energy you generate or consume escapes through your walls, roof, windows, or floors. This leads to higher energy bills and reduced comfort in your home. By upgrading your insulation and installing energy-efficient glazing, you create a thermally efficient envelope around your home. This allows renewable systems to operate at their best, resulting in maximum savings and reduced carbon emissions.

## Key Insulation Areas

### Loft Insulation

Prevents up to 25% of heat loss through the roof.

### Cavity Insulation

Ideal for homes built after 1920.

### Solid Wall Insulation

External or internal insulation for older properties.

### Floor Insulation

Stops cold from seeping up from below.

### Triple Glazing

Reduce heat loss, noise, and condensation.

# Grants, Funding & Financial Help

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Making the switch to renewable energy doesn't have to mean breaking the bank. Thanks to a growing number of **UK government grants** and financial incentives, it's now more affordable than ever to invest in low-carbon home improvements.

## Boiler Upgrade Scheme (BUS)

The Boiler Upgrade Scheme provides grants to help cover the cost of installing air source and ground source heat pumps. You could receive up to £7,500 towards an air source heat pump. This grant is paid directly to your installer, reducing the upfront cost you pay.

## Zero VAT on Solar Panels

Until 2027, the UK government has cut VAT to 0% on the supply and installation of solar PV panels, heat pumps, and battery storage systems in residential homes. That means significant savings on green upgrades.

## Smart Export Guarantee (SEG)

If your home generates more electricity than it uses (for example, through solar panels), the Smart Export Guarantee allows you to sell excess electricity back to the grid through your energy supplier – giving you money off your bill or credit towards future use.

## Other Support

ECO4 grant; if you're on a low income or receiving certain benefits, you may qualify for funding to improve your home's insulation or heating.

# Getting Started

Making your home more energy-efficient and eco-friendly is easier than you might think, especially with the right guidance!

## TO-DO LIST

### Home Energy Assessment

Understand your current energy use, insulation levels, and carbon footprint.

### Set Your Goals

Are you looking to reduce bills, go off-grid, lower emissions, or future-proof your home?

### Select the Right Systems

Our experts will help you find the ideal combination of solar, heat pump, battery, and insulation upgrades.

### Understand Financing Options

Explore grants, payment plans, and return-on-investment timelines.

### Get a Personalised Quote

Call us on **07513263518** to get a personalised quote today!

### Schedule Your Installation

Our certified installers ensure everything is fitted efficiently and professionally.

*Save money,  
reduce reliance  
on the grid,  
and future-  
proof your  
home!*

## Ready to Make the Switch?

Whether you're just starting your journey or ready to install, we're here to help.

**0751326351**



You could cut your home's carbon footprint by 1-2 tonnes a year by switching from gas and grid power to solar, battery, and heat pump systems.

**FIRST  POINT**  
GREEN ENERGY SOLUTIONS

[www.firstpointgreenenergy.co.uk](http://www.firstpointgreenenergy.co.uk)