Solar PV for Your Home

A plain-English guide for UK homeowners considering solar panels

Solar photovoltaic (PV) panels convert daylight into electricity to power your home, reduce bills, and cut your carbon footprint. This sheet summarises what you need to know before deciding whether to go ahead. Click the W2W logo to sign up to the Welly2Wivey WhatsApp group to learn from your neighbours' experiences, including which installers and systems they found best.

Upfront Costs

A typical 3.5 **kWp** system (around 20 m²) costs approximately **£7,000**. The range for most homes is **£5,000–£12,000** depending on system size and roof complexity. Solar panels attract **0% VAT**.

Scaffolding adds £600–£1,200. The **inverter** typically needs replacing after ~10 years (£500–£1,000).

Payback Period

- **7–12 years** — typical UK range
- South-facing roofs achieve the fastest payback
- Daytime electricity users may see payback in **~9 years**
- Low daytime use: closer to **15–16 years**

*Panels last **25–30 years**; payback typically falls well within that. Annual savings of £500–£800 are realistic, combining reduced bills with Smart Export Guarantee (SEG) payments for the spare electricity that you sell back to the grid.*

The Installation Process

How long? Quote to working system: **4–8 weeks**.
Physical install: usually **1–2 days**.

How disruptive? Minimal. Scaffolding stays up for a few days. Power is off briefly during connection. No significant internal works in most homes.

Planning permission? Not usually needed — solar counts as permitted development. Check with your local planning office if your home is listed, in a conservation area, or an AONB.

Step by Step

- **1.** Pre-install roof survey
- **2.** Scaffolding erected
- **3.** Panels and mounting frames fitted
- **4.** Inverter installed (loft or garage)
- **5.** Brief power-off to connect to consumer unit
- **6.** System tested and commissioned
- **7.** Installer notifies DNO and registers for SEG payments

Benefits

- **Lower bills** — typically £500–£800/year saved
- SEG income for electricity exported to the grid
- Protects against future energy price rises
- Reduces your carbon footprint
- Low maintenance; 25–30 year lifespan
- Pairs with battery, heat pump, or EV charger

Drawbacks & Considerations

- Significant upfront cost
- Output is lower in winter
- A north facing roof or heavy shading cuts generation significantly
- Inverter replacement due mid-life (£500–£1,000)

Learn from your neighbours' experiences on the Welly2Wivey WhatsApp group. We have volunteers happy to help by showing their systems & what works for them.

Questions to Ask Installers

Get **at least 3 quotes** and request a **technical survey**, not a sales visit. Check the installer is **MCS**-certified and signed up to the **RECC**.

About the quote:

- What electricity price underpins your savings estimate?
- How much will I self-consume vs. export?
- Is VAT shown at 0%?

About the system:

- What's the realistic annual output for my roof's orientation and shading?
- What warranties apply to panels and inverter?
- Is it sized for future additions — EV, heat pump, battery?

About the install:

- Will you handle DNO notification and SEG registration?
- What monitoring and aftercare do you offer? The best installers will monitor your system remotely and be on hand to answer your 'new user' questions.

Full installer questions checklist:
cse.org.uk/resource/solar-pv-checklist-questions-to-ask-installers-2

Where Solar Fits: The Home Electrification Journey

Reducing energy demand before investing in generation gives the best return. A well insulated home will have lower energy costs no matter the heating system you have. A solar install will reduce your grid energy, provide some income, and set you up for further improvements. A battery allows you to use cheaper tariff and PV generated power at any time. The **BUS** (boiler upgrade scheme) grant of £7,500 is available for heat pump installations. This isn't the definitive order, but a general progression.

Step 1: Insulation & Draught-proofing	**Step 2: Solar PV Panels**	**Step 3: Battery Storage**	**Step 4: Heat Pump (replace boiler)**	**Step 5: EV Charger & smart controls**
Reduces heat loss and improves every technology that follows. Improves heat pump efficiency and shortens payback	Generates free electricity. Fits most homes independently. Install early	Stores surplus solar for evenings and reduces the need for you to buy grid power Raises solar self-consumption from ~30% to more than 70%. Smart tariffs (e.g. Octopus Cosy) allow you to charge your battery at cheaper rates	Energy efficiency of your home improves but electricity demand rises so size your solar accordingly. £7,500 Boiler Upgrade subsidy available (will be managed by your installer and included in quote)	Charge your EV from your solar surplus. Smart tariffs allow you to access very cheap electricity tariffs (e.g. Octopus night rate of 7p/kWh)

Mythbusting: Common Misconceptions

These are the six claims most likely to put homeowners off solar, and what the evidence actually shows.

"The UK isn't sunny enough for solar to be worthwhile."

Panels generate from daylight, not direct sunshine. Germany — with a similar climate to the UK — has been a world leader in solar for years. The UK receives around 60% of the solar radiation found at the equator. Energy Saving Trust: solar myths debunked

"Solar panels take decades to pay back."

The typical UK payback period is now 7–12 years, not 20+. Panel prices have fallen over 80% since 2010, while energy prices have risen. After payback, panels typically run for a further 15–20 years. Sheffield Renewables: payback explained

"Solar panels are high-maintenance."

Maintenance is minimal. UK rain does most of the cleaning naturally. The Energy Saving Trust recommends a clean every 12–18 months and a professional check every few years. No moving parts means very little to go wrong. Energy Saving Trust: solar maintenance

"Fitting solar will make my house harder to sell."

Evidence points the other way. A 2024 Swansea University study of 1.5 million transactions found homes with solar sold for 6–7% more. 65% of buyers say solar panels make a property more attractive (Eco Experts, 2024). Note: leased (not owned) panels can complicate sales. Sunsave: solar and house value

"I need a south-facing roof."

South-facing is ideal, but east–west roofs typically achieve 80–85% of the output of a south-facing system — often enough to justify installation. North-facing alone is not recommended. Panels can also go on a garage or outbuilding. Ideal Home: solar panel myths

"Battery storage is essential."

A battery is useful, but not necessary. Without one, surplus electricity is exported via the Smart Export Guarantee. A battery makes most sense if you use a lot of electricity in the evenings or have a heat pump or EV. It adds cost and extends payback by 1–3 years. CSE: battery storage advice

Further reading: energysavingtrust.org.uk/myths-about-solar | cse.org.uk/advice/a-complete-guide-to-solar-pv

Key Resources

Centre for Sustainable Energy (CSE) — Complete Solar PV Guide
Independent charity. Plain-English guide covering costs, installation, grants and maximising your panels. The recommended first stop.
cse.org.uk/advice/a-complete-guide-to-solar-pv

CSE — Solar Wizard (free roof assessment)
Enter your address for a free, independent, LiDAR-based estimate of annual generation with shading analysis.
solarwizard.org.uk

CSE — Installer Checklist (downloadable)
Covers system design, components, warranties, connection and what could go wrong. Essential before accepting any quote.
cse.org.uk/resource/solar-pv-checklist-questions-to-ask-installers-2

Energy Saving Trust — Solar Myths & Installation Guide
Government-backed. Covers myths, finding an MCS-certified installer, planning permission, and the Smart Export Guarantee.
energysavingtrust.org.uk/myths-about-solar | energysavingtrust.org.uk/solar-panel-installation

MCS Certified — Find an Installer
Search for MCS-certified installers locally. Certification is required to qualify for Smart Export Guarantee payments.
mcscertified.com

Document produced from a human's prompt by Claude LLM and edited by Greener Langford Budville. Information correct as of May 2026. Costs and tariffs change — always verify current figures with an independent adviser. General guidance only; not financial advice.

Welly2WiveyCorridor.org - Linking Nature & Community between Wellington & Wiveliscombe

Welly2Wivey is just one of many local community groups - check out the Mycelium Map for more near you