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Introduction

Are you considering installing solar panels on your home and want to know more about how they work plus the benefits?

As you will know solar energy is a clean, renewable, and increasingly affordable option that can reduce your electricity bills and your carbon footprint.

This guide provides an overview of what you need to know about residential solar installations.

What is solar, how can it help you and what is our process for identifying the best options for you.

Benefits of Solar

Economic Savings

Lower Energy Bills: Generating your own electricity reduces the amount you need to buy from your utility company. Sized appropriately and you may just be able to avoid any grid electricity at all. (Couple solar with a battery and you can stand to save even more).

Incentives: Government schemes such as the Smart Export Guarantee (SEG) pay you for the excess electricity you export to the grid. Whilst it may not be a huge income it's better than nothing!

Energy Independence

Reduced Reliance on Grid: Generate your own electricity and be less affected by power outages and rising electricity prices. This is especially relevant for rural areas where power outages can occur more frequently and be harder to resolve.

Environmental Impact

Reduces Carbon Footprint: Solar energy is clean and renewable, helping to reduce greenhouse gas emissions and combat climate change. Whether you're an activist for the green agenda or not, the reality is that more and more rules around renewable energy sources are coming so it's better to be prepared.

Sustainable: Solar power is a sustainable resource, unlike fossil fuels which are finite. The unlimited nature of solar is what makes it so beneficial as you're not charged to gather it and use it in your home.

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Components of a Solar System

Solar Panels

Function: Convert sunlight into electricity. Positioned for the maximum exposure to sunlight they soak in the rays ready to be converted to usable energy.

Inverter

Function: Converts the direct current (DC) electricity generated by the solar panels into alternating current (AC) electricity used by your home. Without this the solar energy harnessed would be useless for any of your needs.

Mounting System

Function: Secures the solar panels to your roof or ground. Making sure that the panels are securely attached to prevent anu issues with adverse weather is crucial. This is done via a detailed survey to ensure that the mounting system is suitable for the static load of the panels as well as any wind uplift.

Battery Storage (Optional)

Function: Stores excess electricity for use when sunlight is not available. This means that you can use your solar generated power even at night. You can also charge the battery at a cheaper overnight rate for us during the day to lower your bills even further.

Monitoring System

Function: Tracks the performance and energy production of your solar system. This helps you track when the system is at peak generation and can show how much you have saved on your bills.

Steps to installing Solar

Assess Your Home's Suitability

Roof Condition: Ensure your roof is in good condition and can support solar panels.

Sunlight Exposure: Determine if your roof gets enough sunlight. South-facing roofs are ideal. We will however look at all elevations and use them all to figure out the best layout.

Design and Permits

System Design: Our expert advisor designs a system tailored to your energy needs and roof structure. We will look at the different elevations to see what the generation looks like and how that affects your payback period.

Planning: We handle the necessary application and approvals. You might need planning permission which is up to you to sort but we can help guide. On many occasions this will fall under **permitted development**.

Installation

Setup: Our team of installers then start work on the solar system. We will first attach the mountings, arrange the cables then attach the panels themselves.

Timeline: Installation usually takes less than a week but varies on the system size and property type.

Certification and Activation

Certification: Being MCS certified we can commission the work we install up to industry standard.

Activation: Once approved, your system is connected to the grid and activated.

Financial Considerations

Upfront Costs

System Cost: Includes panels, inverter, mounting, and labour.

Financing Options: Loans, leases, and Power Purchase Agreements (PPAs).

Incentives and Rebates

Smart Export Guarantee (SEG): Pays you for excess electricity you export.

Tax Benefits: No VAT charged.

Return on Investment

Savings: Calculate potential savings on your electricity bills.

Payback Period: Typically ranges from 5 to 12 years, depending on system size and location.

Maintenance

Routine Maintenance

Cleaning: Keep panels clean to maintain efficiency.

Inspections: Regularly check for damage and ensure connections are secure. Yearly maintenance is also needed to ensure all warranties remain valid.

Monitoring System

Performance Tracking: Use monitoring systems to track energy production and system performance.

FAQs

How long do solar panels last?

Lifespan: Solar panels typically last 25-30 years.

Do solar panels work in cloudy weather?

Efficiency: Panels still produce electricity on cloudy days, but output is reduced.

Can I go off-grid with solar panels?

Feasibility: While possible with sufficient battery storage, most systems remain connected to the grid for reliability.

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Conclusion

Installing solar panels is a significant but rewarding investment. By understanding the basics of solar energy, the installation process, and the financial implications, you can make an informed decision that benefits both your wallet and the environment. For personalised advice, consult with an award winning solar installer who can assess your specific needs and guide you through the process.

Interested in solar?
Fill out our Enquiry Form for a free quote.

https://ohmenergy.co.uk/solar/solar-pv/quote/

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