



CASE STUDY

Solar Installation in Milton Keynes, Buckinghamshire

the **greenway**
Solar

OVERVIEW



A four-bedroom detached property in Milton Keynes has taken a major step towards energy independence and sustainability with the installation of a tailored solar PV and battery storage system. Featuring 12 high performance Aiko 460W panels, a SolarEdge HomeHub inverter, and substantial battery capacity, the system has been designed to maximise self-consumption, reduce carbon emissions, and provide long-term savings for the homeowner.

THE CHALLENGE

The property owners wanted to significantly reduce their reliance on the grid while ensuring their energy supply remained resilient and cost efficient. With rising energy costs and increasing awareness of environmental impact, the challenge was to create a system that could harness the property's south-facing roof for optimal solar generation, while also incorporating reliable storage and backup capability.



OUR SOLUTION

The Green Way Solar Ltd designed and installed a bespoke system comprising:

- 12x Aiko 460W solar panels, providing high efficiency generation.
- A SolarEdge 5kW HomeHub inverter with optimisers to maximise output from each panel.
- 2x 10kWh batteries with a backup interface, enabling the household to store excess solar energy, use it during peak times, and maintain power during outages.

This solution ensures the family can benefit from a secure, future ready energy setup with significant reductions in grid dependency.

RESULTS

The installation is already delivering measurable benefits. It is predicted that 54% of the household's annual electricity demand will be supplied directly by solar, reducing reliance on the grid and lowering costs. This translates into annual carbon savings of 1,114kg CO₂, the equivalent of driving 3,980 miles by car or the carbon absorbed by 51 trees.

In addition, the system will export around 1,219 kWh of clean energy back to the grid each year, avoiding a further 259kg of CO₂ emissions.

Within the first 3 months of operation, the system has already produced 3.16 MWh of solar energy, with

- 1.02 MWh consumed directly in the home
- 1.14 MWh stored in the batteries
- 1.00 MWh exported to the grid.

This has resulted in 610kg of CO₂ savings, equivalent to 9,000 kilometres driven entirely on sunshine.

Carbon Emissions Saved Annually

↓ 1114 kg CO₂

Renewable Energy Production

↑ 54%

The Green Way Solar completed the installation with precision and professionalism. The system now delivers consistent renewable energy generation, reducing the household's reliance on the grid and significantly cutting electricity bills. Even with the challenge of working in a fully occupied home, the project was delivered on time and on budget, with minimal disruption. The homeowners were highly satisfied with both the performance of the system and the care taken throughout the installation process.

From day one, the project followed a methodical, safety first approach. A full structural assessment confirmed the roof's suitability for solar PV.

All wiring, inverters, and protection devices were installed with precision and compliance in mind. Once operational, the system was equipped with advanced monitoring tools that provide real-time data, instant fault alerts, and performance dashboards. These tools allow the homeowner to keep a close eye on energy usage, grid interaction, and long-term cost savings, while ensuring continued compliance with grid regulations.

WHY CHOOSE THE GREEN WAY SOLAR?

The Green Way Solar delivers smart, reliable energy solutions tailored to your home or business. We combine expert system design, high-quality components, and professional installation to maximise performance and long-term value.

From initial consultation to final handover, our team ensures a smooth experience with minimal disruption. Every system is carefully designed to reduce energy costs, lower carbon emissions, and increase your energy independence.

With advanced monitoring, responsive support, and future-ready technology, we make going solar simple, effective, and built to last.



CONCLUSION

This Milton Keynes installation highlights how a well designed domestic solar system can transform household energy use. By combining advanced solar panels, smart inverter technology, and significant battery storage, the family now enjoys lower energy bills, greater independence from the grid, and a much reduced carbon footprint.

The project is a clear example of how The Green Way Solar helps homeowners take control of their energy future while contributing positively to the environment.