



SOLAR PV INSTALLATION FOR A COMMERCIAL MANUFACTURER

Sector: **Manufacturing**

Technology: **Solar PV**

System Size: **325 kWp**

PERFORMANCE & FINANCIAL:

- **Estimated Annual Generation:**
252,000 kWh
- **Payback Period:** 6.2 years
- **Return on Investment (IRR):** 19%
- **20-Year Return:** £970,000
- **Levelised Cost of Solar:** 4.3p/kWh

ENVIRONMENTAL IMPACT:

- **Annual Carbon Savings:**
52,182kg CO₂
- **Equivalent to:**
 - ✓ 81 tonnes of industrial coal
 - ✓ 9072 trees planted

Conversion factors based on UK Government greenhouse gas data, June 2023: 1 kWh = 0.20707 kg CO₂; Industrial Coal = 0.32262 kWh/tonne; Tree Planting = 0.036 kW/tree

PROJECT OVERVIEW

A commercial manufacturing company aimed to reduce its energy expenses and carbon footprint while optimizing roof space for maximum solar energy generation. After conducting an energy audit and site survey, the following measures were implemented.

KEY MEASURES

System Design

High-efficiency solar panels were used to maximize system output and returns.

System Installation

Full supply, installation, and commissioning, completed on schedule.

Grid Integration

The system was fully connected to the grid with a compliant G99 handover process.

Real-Time Monitoring

Continuous performance monitoring revealed that the system exceeded initial generation estimates.

SOLUTION

This project demonstrates the benefits of investing in solar PV technology, with notable financial and environmental returns. By leveraging advanced solar panel technology and optimizing roof space, the company achieved significant energy cost savings while contributing to sustainability goals.