Leicester based BPX achieve 70% coverage with solar

About BPX

Founded in 1965, BPX is one of the UK's leading independent distributors of industrial automation, control, and low-voltage power components. Headquartered in North Leicester, the company supports thousands of manufacturing, OEM, and engineering customers across nationwide branch networks.

As a specialist provider of energy-efficient automation and building management technologies to their clients, BPX maintains a strong commitment to corporate sustainability. Operating continuous, mission-critical infrastructure - such as 24/7 server environments and climate control systems - they sought to practice what they preach by slashing their operational carbon footprint while securing long-term energy independence.

What was the solar challenge facing BPX?

BPX was determined to implement sustainability initiatives and shield its operations from rising grid electricity

System Size: 171kWp

Annual Output: 153,410kWh

Annual CO2 Saving: 38.3 tonnes

Return on Investment: 3 years

Savings over 30 years: £1.5 million+

"Our installation has been successful. It's done what it was proposed that it would do. We've had no problems. The people that we've dealt with have been friendly, polite and courteous. It's difficult to ask for more."

BPX
Guy Collins, Director

View the case study video

rates. However, initial internal assessments suggested that their primary commercial facility was unsuited for commercial solar PV generation.

Because the main building's spine runs North to South, the pitched roofs face directly East and West rather than South. Conventional assumptions led BPX to believe an East-West configuration would produce subpar generation efficiency, making a PV system financially unviable. Additionally, given their round-the-clock power requirements for server infrastructure and HVAC, BPX required absolute certainty that a solar array could reliably reduce grid demand.

What solution did Geo Green Power implement?

BPX reached out to James at Geo Green Power to perform an in-depth technical analysis of the roof and overall energy consumption. Geo Green Power demonstrated that an East-West roof pitch would still be hugely beneficial - capturing solar radiation earlier in the morning and later into the evening, providing a flatter, broader generation curve ideal for commercial facility usage. Rather than attempting to sell an oversized system, Geo Green Power engineered a tailored 171kWp Solar PV system mapped directly to BPX's daytime energy profile:

- 376 Canadian Solar PV panels to optimise light harvesting.
- 2 SolarEdge inverters & 188 SolarEdge optimisers to allow panel-level efficiency monitoring and overcome partial shading/orientational losses.

Geo Green Power provided detailed, transparent consumption modelling so BPX had total confidence prior to installation.

What results did the solar produce?

Post-commissioning performance rapidly proved the strength of the system's design:

Accelerated Payback: Initially modelled for a 3-year ROI based on a ~150MWh annual generation estimate, the array produced over 100MWh in its first six months - putting total payback on track for under 2.5 years.

70% Demand Coverage: During summer daylight hours, 100% of the building's active demand is powered by solar generation. Even with continuous 24/7 server loads running overnight, ~70% of total summer electricity consumption is supplied directly from the roof.

Long-Term Value: The project eliminates 38.3 tonnes of CO_2 annually and is projected to yield over £1.5 million in cumulative savings and income across its 30-year lifetime.

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