Meeting ESG targets with commercial and industrial PV installation

Generating their own solar power is an increasingly attractive option for businesses that are looking to optimise their operations and demonstrate their commitment to environmental sustainability. For commercial and industrial (C&I) businesses with suitable load-bearing roofs or ground space, solar power generation comes with a range of benefits, from energy independence to cost savings and protection against price volatility.

An array of solar panels can enhance a business's brand image and reputation. Customers and stakeholders increasingly value environmentally responsible practices, and by visibly demonstrating a commitment to clean energy, businesses can attract and retain customers, employees and investors who align with their values.

Commercial and industrial solar installations face a different set of challenges from the residential and utility-scale installations that we might be more familiar with. The main challenges involve varying energy demands, regulatory frameworks, and getting to grips with the financing options available for commercial-scale solar installations. It's not surprising that many organisations look to specialist installation companies to help guide them through the processes.

Over recent years, a whole industry around C&I solar has developed to meet demand for installation services, as well as provide proven expertise and knowledge. Lessons from early installations have been learnt and successful installers have navigated an ocean of suppliers to create optimised solutions for their clients.

Value in the supply chain

A perennial challenge for installers has been the availability and reliability of essential component parts that make up the solar installation. Leading installers carefully select suppliers who they know will provide components that will be fit for purpose, both today and into the future. After all, businesses that invest in installing C&I solar are in it for the long haul. The initial investment is often a significant sum, and the payback period has to be realistic. In the past, this may have put projects off, but fortunately the ROI timeframe has come down in recent years. Now more and more businesses are putting long-laid plans into action.

One company taking positive steps after considering installing solar for over five years is Oldham based Quantum Profile Systems (QPSL). It engaged the services of Green Economy member Perfect Sense Energy to design and install a 558 kW solar system when spiralling energy costs started to hit home. QPSL Managing Director, Simon Crossley said, 'We first looked into installing solar in 2018, but at the time it was a payback of about six years. It's a no-brainer now.'

Forecast savings from the first year of QPSL's 2,497m² solar array are around £150,000. There are many such success stories, and the supply chain for solar components plays a vital role in increasing confidence that solar installations are a worthwhile investment for a commercial or industrial enterprise.

The importance of inverters

Inverters are a key component of any solar installation. They convert the power generated by solar panels, which is DC, into AC power that can be used in the plant or office or exported to the grid.

Solis Inverters include products designed specifically to address the increasing needs of industrial and commercial PV plants for clean energy. One range, the Solis Inverter 5G Pro, features an increased power rating of more than 600 W and current capacity of up to 18 A per string. This helps C&I solar projects meet high demands for energy density, power quality, reliability, energy control and low levelised cost of energy (LCoE).

An increasing number of commercial and industrial solar installations benefit from Solis Inverters, which have become an important link in the chain for C&I Solar specialists like Perfect Sense Energy.

Solar makes perfect sense

Based out of Manchester in the UK since 2010, Perfect Sense Energy has installed more than 150 industrial solar panel systems that have generated around 9 GWh and kept over 6,000 tonnes of CO_2 out of the atmosphere, the equivalent of planting around 5,000 trees.

Perfect Sense Energy originally used Solis Inverters because of the reliability of their supply chain. As the partnership has developed, Solis Inverters has proven to be an ideal inverter provider for many reasons. Solis Inverters are compatible with all types of on-site metering. It makes full use of the user-friendly, reliable Solis Monitoring platform to provide inverter data across every level of the company's service

agreements. The API makes it easy to set up the data monitoring presentation specifically tailored to the client.

While the availability and capability of product features are always important, other factors can make the world of difference. As Luke Rowson, Head of Sustainability & Strategy at Perfect Sense Energy, explained, 'We value the proactive and attentive Solis Inverters after-sales team who support our engineers when they are onsite performing firmware updates and other maintenance services.'

C&I solar in action

Solis Inverters play an important role in helping Perfect Sense Energy's customers meet and exceed their ESG objectives.

To reduce the carbon footprint of its manufacturing sites across the Technical Fire Safety Group, Pyroguard recently made a £500,000 investment in a bespoke solar PV system with a generator surface of over 2,900 m^2 and over 1,500 PV modules.

Technical Fire Safety Group CEO, Neil Tilsley, said, 'We're absolutely committed to ESG, taking our responsibility as a leading manufacturer in the industry very seriously and hopefully inspiring others in our supply chain. As a company, we're always looking for smart ways to save energy. I'm very proud of our latest investment, with the installation of the solar panels helping us to reduce the carbon footprint of our Haydock site.'

Every operational decision that an industrial or commercial enterprise makes, even those regarding its environmental legacy, will ultimately involve a consideration of efficiency and cost-effectiveness. Essentially, there has to be some payback or the initiative is a non-starter. Pyroguard's installation is forecast to save £240,000 in its first year and importantly save 123 tonnes of carbon from entering the atmosphere each year. It uses six 100 kw Solis 5G Pro Inverters which are designed to accommodate the growing adoption of higher powered 182 mm and 210 mm PV panels in the commercial and industrial sector solar markets.

Solar panel technology has improved significantly over the years, becoming more efficient and cost-effective. As a result, businesses can now generate more electricity from a smaller rooftop area, making solar installations more feasible for commercial and industrial buildings.

Thanks to advances in PV technology, C&I solar is no longer the preserve of very large sites. At under 500 m^2 the solar array at appliance, electrical and electronics manufacturer Hager UK's Telford site is expected to generate 98.40kWp in the first year and make a significant step in Hager's ongoing commitment to sustainability.

The system, which uses Solis 100 kW 5G inverters, is expected to generate an average of 20 tonnes of carbon savings annually over the next 25 years. The payback period for Hager's system is estimated to be three to four years, making the investment worthwhile. More than this, the decision to install solar panels at its Telford headquarters speaks volumes about Hager's commitment to reduce its carbon footprint and promote sustainability throughout its operations.

For commercial and industrial enterprises who are keen to demonstrate their commitment to environmental sustainability, working with a C&I solar installer with an established supply chain of leading component providers like Solis Inverters return numerous benefits. By generating its own electricity, a business can protect itself against inevitable future energy price volatility, reduce both its carbon emissions and reliance on the national grid and clearly signal its green credentials.

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