Deliver growth with a scalable, sustainable and compliant energy strategy

Powering competitiveness for industrial manufacturers
The need for a flexible, scalable energy supply

To achieve sustainable growth while remaining responsive to customers, competitors and external demands, UK industrial manufacturers need to continually innovate. Meeting the demands of customers and regulators also requires manufacturers to make improvements in environmental performance.

Given the energy intensive nature of industrial manufacturing processes, new energy technologies offer significant opportunities to enhance manufacturers’ sustainability credentials, while also helping power innovation and growth.

To strengthen their long-term future, we believe it is critical for industrial manufacturers to have a flexible, scalable and sustainable energy strategy. This provides a platform for growth – enabling both the easy adoption of new technologies and the ability to scale output – and also ensures compliance with environmental regulations.

For many UK industrial manufacturers, innovation is a strategic priority for facilitating growth and – through the development of new products and approaches – a key differentiator against lower-cost overseas competitors. A global PwC survey found that 92% of industrial manufacturing executives believe innovation is important to future revenue growth.²

One approach is to adopt new technology, such as building digitisation and connected intelligence into products, and introducing new production techniques like 3D printing. These new technologies enable manufacturers to become more responsive to customer demands, improve production efficiency and capitalise on the opportunities offered by the digital revolution – the 3D printing market within the metals industry, for example, is set to be worth as much as £7.5 billion by 2030.³

Manufacturers are also embracing new, service-based business models. GE Aviation, for instance, has moved from selling jet engines to selling power by the hour – as a utility company would. Indeed, 48% of industrial manufacturers said they would be spending more on servitisation in the coming year,⁴ for example offering after-market services such as after-sales support, repairs and maintenance. All of which squeezes finances.

Growing consumer demand for greener products – flowing through the supply chain – also creates pressure to invest in sustainability. Given the industrial manufacturing industry’s large carbon footprint, this pressure is added to by new regulatory compliance challenges. For example, by 2021 (phased in from 2020), the fleet average to be achieved by all new cars is 95 grams of CO₂ per kilometre.⁵ Failure to meet new regulations or show an active engagement in improving sustainability puts manufacturers at risk both of losing customers and contracts and of facing serious fines. Volkswagen, for example, was fined £880 million for failing to comply with emissions tests.⁶

ESOS (the Energy Savings Opportunity Scheme) – the Government’s mandatory energy auditing scheme – requires large organisations in the UK to undertake comprehensive assessments of energy use and energy efficiency opportunities at least once every four years.

We believe it’s essential for manufacturers to look at new ways of overcoming these challenges. Having the right energy strategy is key for creating a sustainable platform for growth and innovation, whilst ensuring compliance with tightening environmental regulations.
Adopting a progressive energy strategy

Many manufacturing processes – including heating, ventilation, compressed air, continual machine usage, lighting, boilers and cooling – are energy intensive. Within the automotive manufacturing production line, for example, painting accounts for 50% of total energy consumption.\(^{11}\)

The environmental impact can be significant – CO\(_2\) emissions from industrial manufacturing account for 40% of total CO\(_2\) emissions worldwide\(^{12}\) – creating pressure for manufacturers to reduce their carbon footprint from external stakeholders such as regulators and customers.

We are convinced that a progressive energy strategy has a key role to play, not just in providing a platform for innovation and growth, but also in enabling manufacturers to comply with increasingly demanding regulatory requirements. 56% of respondents in a Centrica Business Solutions survey said that having a coherent energy strategy provided an opportunity for achieving a sustainable business model.\(^{13}\)

Moving forward with new technologies and approaches

New energy technologies and approaches offer many opportunities for industrial manufacturers to improve the flexibility and scalability of their energy supply, whilst also reducing carbon footprint to satisfy regulatory demands. These include:

**Renewable generation technologies** such a solar, enable manufacturers to be more energy self-sufficient as well as reducing their carbon emissions, whilst also utilising unused spaces such as roofs. In a Centrica Business Solutions study, over a quarter of manufacturing respondents said they had adopted solar across most of their sites.\(^{14}\)

**On-site generation technologies** such as combined heat and power (CHP) can also cut a site’s energy use by up to 25%,\(^{15}\) reducing carbon emissions and ensuring a more scalable supply of energy to support the adoption of new production technologies. In a Centrica Business Solutions study, 25% of manufacturing respondents said they had already installed CHP units across some of their sites.\(^{16}\)

**Energy insight solutions** help manufacturers drive reduced carbon usage, while also delivering insights into real-time, device-level data on energy usage within production processes, unlocking opportunities for innovation. However, when it comes to staying compliant, adopting lower-carbon technologies is only one part of the picture. Manufacturers need to have the reporting systems that enable them to demonstrate their achievements to regulators and customers. For example:

**Environmental reporting solutions** allow manufacturers to fully reap the benefits of adopting new energy technologies. Of the world’s 250 largest corporations, 92% now report on their sustainability performance.\(^{17}\)

Yet, despite the huge potential for using new technology to improve sustainability and drive innovation, many manufacturers are facing capex constraints or skills gaps that prevent them from capitalising on these opportunities. One survey highlighted that there are 5,000 vacant jobs in the UK automotive industry due to skills shortages.\(^{18}\)

But new approaches to funding and managing energy, and working with a partner who can provide end-to-end support, enable manufacturers to overcome internal constraints. For example:

**Flexible funding and contractual models** provide the opportunity to reduce reliance on capex – freeing up resources to invest in growth innovations and new business models. In a Centrica Business Solutions survey, 57% of manufacturers said that funding was very important to them when it comes to making energy improvements.\(^{19}\)

**Case study:** We helped Toyota achieve a 10% reduction in their site’s energy use by installing 13,000 solar panels, which also reduced carbon emissions by over 1,800 tonnes a year.

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1. Energy Advantage Research, Centrica Business Solutions. Statistics based on a six country survey of more than 1,000 energy decision makers in large organisations
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6. BBC: https://www.bbc.co.uk/news/business-44474781
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18. Employers’ Views of the Jobs and Skills Required for the UK Automotive Industry, SMMT, 2016
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Your priorities

Our experience of working with industrial manufacturers has highlighted the energy strategies that we believe you should prioritise to ensure you can build a more sustainable future:

- **Build a platform for innovation and growth** with a flexible, scalable energy strategy that can adapt quickly to changing demands.
- **Focus on reducing your carbon emissions** by adopting low-carbon, on-site generation technologies.
- **Ensure compliance and meet customer demands** by reporting on your sustainability achievements.
- **Overcome staff shortages and financial constraints that prevent new technology adoption** by exploring different approaches to managing and funding energy.

Our solutions

Our work with leading industrial manufacturing businesses across multiple sectors means that we are ideally placed to help you focus on investing in innovation and business growth, while improving your sustainability credentials. Our solutions include:

- **Expert advice and specialist skills** to achieve a sustainable, growth-oriented energy strategy.
- **Low-carbon, on-site generation (including CHP, solar and storage)** that reduce your carbon footprint and provide a flexible, scalable energy supply.
- **ESOS audits and energy change advice** for UK manufacturers that help you understand and meet your compliance obligations.
- **Flexible funding models** that overcome budgetary constraints and free up capex to invest in R&D and innovation.
- **End-to-end delivery capability** that reduces dependence on in-house resources and enables faster deployment of new solutions.
- **Environmental performance tracking** that helps demonstrate the results of your sustainability programme to your key stakeholder groups.
- **Insight and analytics solutions** that identify opportunities to reduce carbon emissions across your production facilities.

We helped one manufacturer reduce their sites CO₂ emissions by 30%, after installing a CHP unit which was able to deliver 60% of their site’s energy requirement.