

aggreko

MANUFACTURING

Increase your production with temporary power and cooling



Across the UK and Ireland, the manufacturing sector is experiencing a huge spike in demand – the highest in the UK since early 2008.¹ In particular, industries within the sector are profiting from an overall rise in exports, largely driven by increased global demand and attractive exchange rates because of a weaker sterling.

In short, business is booming, but growth has its own set of demands and risks – and that’s where Aggreko and our bespoke solutions can help your manufacturing processes meet demand and optimise operating expenditure (OPEX).

Factors influencing this positive period of growth in manufacturing output include the government’s drive to boost manufacturing through economic policies and incentives, the availability of a skilled workforce, and the reputation of established companies and their products.

¹ BBC News, UK manufacturing output at its highest for 10 years
<http://www.bbc.co.uk/news/business-42633502?domain=bbc.co.uk>

Despite this, businesses within the manufacturing sector remain extremely cautious to invest in capital expenditure (CAPEX) programmes needed to continue this growth, because of the uncertainty around Brexit and future exchange rates. There are also concerns about any possible trade tariffs imposed by the US and other global trading nations, and perhaps even by the EU after the terms of Brexit are finalised.

For smaller manufacturers, limited access to the finances they require to expand their businesses is often a major problem.

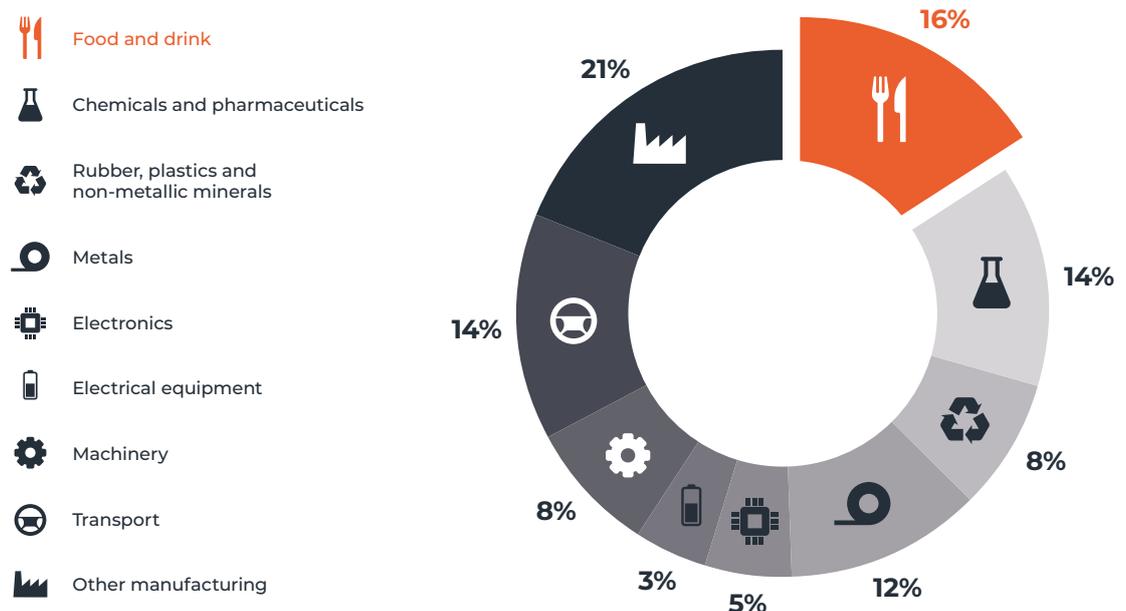
Manufacturing: an increasing market

The UK is currently the eighth largest manufacturer in the world by output.² Manufacturing now accounts for 44% of UK exports, with 50% of all its exports currently sold to the EU.³

Overall, the manufacturing industry contributes 11% of the UK's Gross Value Added (GVA), and each sector is indicated in the following chart.⁴ This shows that apart from the general classification for 'other manufacturing,' the main sectors include food and drink, chemicals and pharmaceuticals, and transport.

What is modern manufacturing?

Gross Value Added (GVA) by manufacturing sector.



Source ONS – The Blue Book (2016)

Manufacturing: an increasing market

Food and drink

- With the global population projected to grow steadily from the current 7.3 billion to 8.5 billion by 2030,⁵ it is expected that food production will need to be increased by 50% to meet demand.
- With a worldwide reputation for their whiskey (whisky), Irish and Scottish producers expect a continuing significant growth, especially with government investment, to grow this industry through grants and training.

Chemicals and pharmaceuticals

- Population growth will result in a huge rise in demand for medicines.
- 13 of the world's top 15 pharmaceutical companies are based in Ireland.

Transport: automotive and aerospace

- Since 2009, the UK's automotive industry has grown the fastest in western Europe,⁶ supported by government incentives and a skilled workforce.
- The UK is Europe's leading aerospace manufacturer, second globally behind the US.⁷

These manufacturing sectors – among others – have one main thing in common: they are all large energy users, with energy representing 20% of their OPEX. Their energy consumption accounts for more than a fifth of the UK's total energy consumption, so energy efficiency and sustainability is high on the agenda for many manufacturing businesses.

⁵ The United Nations, UN projects world population to reach 8.5 billion by 2030
<https://www.un.org/sustainabledevelopment/blog/2015/07/un-projects-world-population-to-reach-8-5-billion-by-2030-driven-by-growth-in-developing-countries/>

⁶ HM Government, Automotive in the UK
<https://invest.great.gov.uk/us/industries/automotive/>

⁷ HM Government, Aerospace in the UK
<https://invest.great.gov.uk/in/industries/aerospace/>



Keeping up with demand

So, what should manufacturers do to sustain their energy and maintain this trend of successful growth?

Meeting increased demand fundamentally requires additional output from a business's production line. However, this isn't always straightforward.

Production line equipment and facility infrastructures will have originally been sized to operate at an optimised output to achieve the planned best return on investment, including allowance for operational time-outs for maintenance. Stretching production operations even further by running at full capacity for extended periods without redundancy can put a serious strain on an existing production line.

The issue for businesses is whether to expand the size of the production line within their existing facility, or if space permits, relocate their production to an additional or new, bigger site.

The ability to adapt to changes in demand by increasing output in a sustainable way, can be a major hurdle for many businesses – not just access to the needed finance and the approval of CAPEX, especially against the backdrop of economic uncertainty, but also in practical terms.



Expansion means more energy is needed

Where manufacturers use electricity or thermal energy in their production processes to power equipment – such as circulating pumps or conveyor systems – or provide cooling for refrigeration plants, increasing production output means also increasing the amount of energy required. All too often, restrictions on this come into play.

- Are there any energy capacity limitations on the local grid, meaning upgrades are not possible?
- If the distribution system operator can supply the required additional power from the existing network, how fast can this be executed?
- Does the additional capacity need detailed planning? What about potential work to upgrade the electricity network, which could mean lengthy delays, even years, before additional power is available on-site?

In the event that expansion plans are being held up because upgrading a site's energy supply is not viable, or the additional power is not available for some time and the business cannot afford further delay, a viable option is the use of temporary power and cooling.



Temporary power and cooling: a compelling proposition

Reduced risk

The use of temporary power and cooling equipment eliminates the approval processes associated with capital investment. Renting or hiring can significantly lower financial risk, as the costs are accounted to OPEX instead of CAPEX. It can also help fill the 1 to 2-year gap usually associated with financial approvals, planning permissions and system upgrades.

This allows businesses to grow – without further delays and without the risks associated with capital investment.

Speed of response

Gaining approval for capital expenditure is a lengthy process, often requiring board approval. This ultimately leads to lost revenue.

As soon as permission to operate on-site generation is granted, rental generation units can be installed swiftly so that the benefits of increased productivity can be achieved.

Hiring is fast and flexible. You can simply off-hire when you don't need the additional power.

Energy cost savings

Reforms in the electricity market, with the integration of flexible methods of demand side response, distributed generation (on-site generation) and energy storage, have been designed to reward large energy consumers who agree to change the way they use electricity from the grid.⁸ This flexibility supports distribution system operators by helping them to balance their network supply and demand – critical at a time when system total demand is growing rapidly.

The financial rewards to large energy users are significant. Major energy cost savings can be made by generating and consuming power on-site instead of using grid power, or alternatively the power generated can be sold back to the grid, creating another form of revenue.

Importantly, these cost savings and the additional income can be invested straight back into the business to sustain future additional growth.

Partnering approach

As a specialist temporary power and cooling company, Aggreko are experienced in working with the manufacturing sector. We have a specialist process services team ready to offer the right turnkey engineered solution – to increase your energy supply, your output and most importantly, your profit margins.

⁸ Ofgem, Electricity system flexibility
<https://www.ofgem.gov.uk/electricity/retail-market/market-review-and-reform/smarter-markets-programme/electricity-system-flexibility>

