Energy & Carbon

OUR ASPIRATION

To improve energy efficiency in the manufacturing process and, reduce carbon emissions generated.

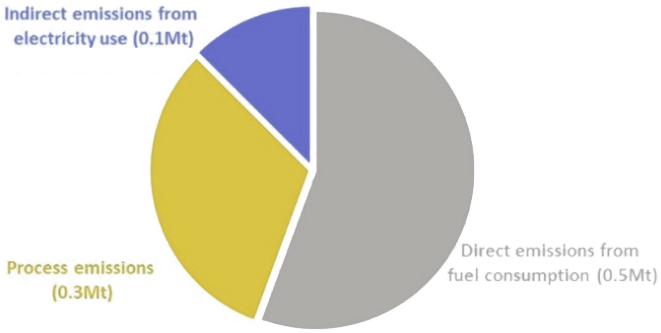
KEY STATS

2019 saw a 1% improvement in carbon efficiency, per tonne of product.

In 2019, all reported production was covered by an Energy Management System (EMS ISO 50001) – driving continual improvement in the sector.

The EU Emissions Trading System (with obligations to monitor carbon emissions and provide additional incentive for carbon reduction) continues to be a key driver for the sector, covering 99% of brick production.

Around **5%** of the sector's electricity is directly provided by **on-site** renewable sources.



CARBON: Breakdown of CO_2 emissions from manufacturing

THE CHALLENGE

Brick manufacturing - firing clay bricks to over 1000°C - is energy-intensive. Once a kiln is up to temperature it will run most efficiently if production levels are maximised. Energy efficiency and CO_2 emissions are therefore linked to market demand for brick, which fluctuates. Emissions are associated with the type of fuels and electricity used. Clays also generate process emissions, which are technologically-difficult to abate.

Whilst incremental efficiency improvements are important, more fundamental 'step-changes' in decarbonisation require new manufacturing technologies, such as fuel switching. Apoption requires technical challenges to considered and overcome; including research and development.

WHERE WE ARE NOW

Energy and carbon efficiency (per tonne of product) remained relatively constant in 2019.

WHAT WE PLAN TO DO

+ The industry is following a Decarbonisation and Energy Efficiency Roadmap. Supported by various innovation and funding opportunities, companies are developing projects to help reduce energy consumption and carbon emissions. The industry has already switched from higher CO_2 emitting fuels (like coal) to natural gas. Other low-carbon fuels like hydrogen and electric-firing will be needed in the future to contribute to the UK Government's 'net zero' 2050 emissions target.

+ Members are involved in discussions to explore on-site technical challenges with the adoption of alternative fuels; aligning with key Government policies and initiatives as they emerge. Hydrogen is recognised as a key technology for the industry, and any roll-out will need to be coordinated with national infrastructure planning.

CARBON: CO_2 emissions from direct & indirect fuel consumption