

Engineering Efficiency for a Global Pharma Site

At a Glance



- £450,000+ in annual energy cost savings
- 3,161 tonnes of CO₂ emissions avoided per year
- 1.6MW CHP system now supplies 25% of site electricity
- Capital payback achieved in under 3.5 years

► Listening First, Then Engineering

Faced with rising energy costs and a projected doubling of their £4 million annual utility spend, a global pharmaceutical manufacturer sought a solution that would deliver measurable savings and long-term value. Projective was engaged to identify a tailored, high-impact solution with a payback period of less than four years.

Key Actions:

- A full Process Energy audit to understand site-wide thermal and electrical demand
- Identification of opportunities to optimise boiler performance and reduce gas consumption
- Recommendation of a right-sized 1.6MW Combined Heat and Power (CHP) system

► Intelligent, Future-Ready Engineering

CHP systems often suffer from inefficiencies due to poor sizing and integration. By modelling the site's full thermal profile, Projective engineered a solution that maximised efficiency and minimised capital expenditure.

The CHP system was designed to superheat boiler feed water in two stages, first using engine cooling energy, then exhaust heat, raising temperatures to 150°C and significantly reducing gas usage.

This tailored solution now generates 25% of the site's electricity demand, improving operational resilience and reducing environmental impact.





Solution Summary



Engineering Excellence

Smart, efficient CHP design



Sustainability

Lower emissions



Compliance & Reliability

Robust, high-performance delivery

Results That Deliver Long-Term Value

The installed system now delivers 1.6MW of electrical power, saving over £450,000 annually and reducing carbon emissions by more than 3,161 tonnes per year.

With a capital payback achieved in under 3.5 years, the project demonstrates how strategic engineering can unlock sustainable performance improvements.

Outcomes:

- 25% of site electricity now generated on-site
- Significant reduction in boiler gas consumption
- Long-term operational and environmental benefits

Trusted Partnership, Proven Impact

This project reflects how Projective works as a strategic partner, not just delivering technical solutions, but helping clients achieve long-term operational and sustainability goals.

Key success factors:

- Tailored design based on full thermal profiling
- Efficient delivery with minimal disruption and fast payback
- Sustainable impact through reduced emissions and energy use
- Collaborative process from audit to implementation

By combining deep technical expertise with a client-focused mindset, Projective helped a global pharmaceutical manufacturer future-proof their energy strategy and unlock measurable value. It's a partnership built on trust, transparency and results.