

CASE STUDY — Global Quick-Service Restaurant (U.K.)

13.2% TOTAL ENERGY REDUCTION

78.60 kWh daily savings | 28,689 kWh annual savings | £4,300 annual financial savings

INTRODUCTION

A high-demand, quick-service restaurant in the U.K. sought to reduce its rising energy consumption across long trading hours. With refrigeration, HVAC, and cooking equipment contributing heavily to electrical load, the site required a validated solution that would deliver savings without operational disruption. To achieve this, the restaurant deployed a dual optimisation approach using FilterPro (power alignment technology) and enPact Refrigeration & Cooling enhancements. Savings were measured using clear ON/OFF comparison windows and year-on-year baselines to ensure accurate verification.

CHALLENGE

- Increasing electricity consumption across refrigeration and kitchen systems
- High HVAC and cooking-related loads during peak operating hours
- Variation between 2024 and 2025 operational patterns requiring fair comparison
- Need for validated, measurable savings to justify wider rollout
- Requirement for rapid ROI while maintaining food-safety and operational continuity
- The restaurant needed a solution that could target electrical waste, refrigeration performance, and cooling inefficiency simultaneously.

SOLUTION

The site deployed the Patented enPact Technologies:

The site deployed the patented enPact FilterPro and patented enPact Refrigeration & Cooling technologies to improve electrical and refrigeration efficiency. FilterPro reduces wasted electrical load by improving power quality, while Refrigeration & Cooling enhances heat exchange and reduces compressor run time.

Because the technologies act on different parts of the system, their benefits combine and amplify, delivering stronger savings together than either could achieve independently.

RESULTS:

Whole-Site Performance (FilterPro + R&C Combined)

- 597.09 kWh/day → 518.49 kWh/day
- 78.60 kWh/day saved
- 13.2% total site reduction
- Equivalent to 28,689 kWh saved annually
- Approx. £4,300 annual financial savings

Comparison	Result
FilterPro Only	10.0% savings
FilterPro + R&C	13.2% savings
Combined Uplift	+32% more savings than FilterPro alone

FilterPro-Only Performance

To isolate the impact of FilterPro alone, comparison periods were captured:

- 642.80 kWh/day → 578.75 kWh/day
- 64.05 kWh/day saved
- 10.0% reduction with FilterPro only

Technology Synergy Explained:

FilterPro alone delivered a strong 10.0% reduction, but combining it with R&C increased savings to 13.2%.

R&C improves cooling efficiency, while FilterPro reduces electrical losses — targeting different parts of the system.

Together, they deliver deeper, non-overlapping savings.

60-STORE ESTATE PROJECTION

Rolling out patented enPact technologies across all UK locations would deliver:

- 1.72 million kWh saved annually
- £258k yearly financial benefit
- 13.2% average reduction per site

A strong, scalable opportunity for national energy and cost reduction.

CONCLUSION

The combined FilterPro and Refrigeration & Cooling optimisation strategy delivered substantial and verified energy savings for this national fast-food restaurant.

By targeting both electrical efficiency and cooling performance, the technologies achieved an 11.1% whole-site reduction, a deeper 21.9% saving on key refrigeration assets, and a rapid payback within the expected return window.

The success provides a strong business case for chain-wide deployment across additional restaurant locations.

INTERESTED IN ACHIEVING SIMILAR SAVINGS ACROSS YOUR ESTATE?

Get in touch to discuss validated energy-reduction opportunities and multi-site rollout potential.

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