

VERIFIED RESULTS · FOOD PROCESSING SITE

Patented capital equipment cut refrigeration energy
41.5% at a food processing site.

With zero operational disruption and no impact to setpoints, product quality, or workflow.

41.5% REFRIGERATION REDUCTION	11.7% SITE-WIDE (MAIN INCOMER)	130,685 KWH ANNUALIZED	8units 12–73% RANGE
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SOLUTION Patented enPact Refrigeration & Cooling optimization. Deployed across multiple high-load refrigeration units to improve heat-exchange, reduce compressor run-time, and stabilize temperatures — without disruption to production, cold-store operation, or workflow. - Improve compressor operating efficiency - Enhance heat-exchange performance - Stabilize temperatures across units - Deliver measured, ON/OFF-validated savings - Zero disruption to production or workflow	CHALLENGE A food processing facility with cold-store, processing, and packing areas faced rising electricity costs. Refrigeration operated continuously and represented a significant share of site demand. Key constraints: - Continuous refrigeration demand across multiple units - High operational temperatures driving excessive compressor cycling - Refrigeration imbalance between units causing inefficiencies - Requirement for proven, validated savings — not estimated reductions - No option for production downtime or operational disruption
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Results. Refrigeration + site-wide savings. Live measurement across 8 refrigeration units using ON/OFF comparison periods validated substantial reductions with zero operational disruption. 41.5% refrigeration reduction (site total, 8 units) 11.7% site-wide reduction at the main incoming supply 358 kWh/day saved · 130,685 kWh/yr annualized - Individual unit range: 12–73% reduction (2 units neutral) - Result exceeded the pre-trial quoted value of 36,202 kWh - Zero operational disruption during trial or deployment	VERIFIED METRICS <table><tr><td>Technology</td><td>enPact R&C</td></tr><tr><td>Refrigeration reduction</td><td>41.5%</td></tr><tr><td>Site-wide reduction</td><td>11.7%</td></tr><tr><td>Annualized savings</td><td>130,685 kWh</td></tr><tr><td>Unit range</td><td>12–73% (2 neutral)</td></tr><tr><td>Units instrumented</td><td>8 refrigeration units</td></tr></table>	Technology	enPact R&C	Refrigeration reduction	41.5%	Site-wide reduction	11.7%	Annualized savings	130,685 kWh	Unit range	12–73% (2 neutral)	Units instrumented	8 refrigeration units
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Refrigeration is the driver. Because refrigeration was the highest-load system onsite, improving compressor efficiency delivered large downstream effects — lowering overall electrical demand well beyond the cold-store areas. The unit-level range (12–73%) reflects the natural variance in load and configuration; the site total was validated at 41.5%.

CONCLUSION enPact Refrigeration & Cooling delivered a 41.5% refrigeration reduction and 11.7% site-wide reduction with zero operational disruption — substantially exceeding the pre-trial business case.	ESTATE ROLLOUT PROJECTION Applied across the client’s three sites: 392,000 kWh/yr savings, consistent 11–12% reductions per location — with no operational disruption.
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