Tackling Energy Costs in a Modern Shoe Factory

Sustain8

CHALLENGES

The client is a leading Italian shoe manufacturer with 600 employees and nine production lines, balancing craftsmanship with modern production demands. Rising energy prices exposed the need to maintain quality while increasing throughput, while operating within the typical engineering and operational resource constraints faced by manufacturers. Their baseline electricity use was 174,000 kWh/month, with growing concern over profitability and disruption risks from change initiatives.

Like many manufacturers, energy costs were unpredictable and rising. Management feared the complexity and potential disruption of implementing meaningful change across busy production lines. Energy spend eroded margins, created planning uncertainty, and risked deferring sustainability goals. Teams across departments—operators, maintenance, engineering—were already stretched thin. Cost pressure and sustainability commitments demanded quick, low-risk improvements without compromising daily output.

OUR APPROACH

A cross-functional team of six (operators and engineers) convened to map energy hotspots and routine behaviours. Focused on compressors, line setup, and daily operations—areas with repeatable actions and measurable impact. Nine-month programme emphasising practical, actionable improvements embedded into daily

Energy efficiency in shoe manufacturing without major capital investment

Client: Leading Italian shoe manufacturer

Industry: Footwear manufacturing

RESULTS

- **22%**
  reduction in electricity use
- **~€8,350**
  cost saving per month
  (≈€100k/year)
- **~11.5 tCO_2**
  reduction per month
- **4 MONTHS**
  payback

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routines with clear comms and minimal disruption. Incremental changes, operator ownership, checklists and visual cues; weekly stand-ups for progress and issue resolution.

THE RESULTS

- **Key changes:**
  - Compressors: 8 targeted initiatives (leak detection and repair, pressure optimisation, smart scheduling, maintenance intervals tightened)
  - Production line setup: 5 initiatives (standardised start-up/ shutdown, idle-time reduction, sequencing for peak-load smoothing)
  - Production operations: 4 initiatives (operator energy checklists, real-time dashboards, "lights-out" zones, machinery sleep modes)
- **Electricity:** 22% reduction in electricity use (saving 38,280 kWh/month)
- **Time:** Time to impact: within nine months; payback period: four months
- **CO_2 reduction:** ~11.5 tonnes/month
- **Cost savings** ~€8,350/month (≈€100,200/year)

UNLOCKING SUSTAINABILITY

- Start with your people: Real improvements come from those who know the processes best.
- Focus on achievable wins: Small, targeted changes can add up to big results.
- Measure and celebrate progress: Sharing results builds momentum and confidence.