

Energy Technology List (ETL) – Retrofit Energy Efficiency Report

This report provides five example retrofit technologies listed on the UK Energy Technology List (ETL). Each example explains how existing equipment can be upgraded to improve energy efficiency, reduce operational costs, and lower carbon emissions. Cost estimates are provided in both GBP (£) and EUR (€).

1. Condensing Economiser – Boiler Flue Heat Recovery

Description: A condensing economiser is installed in the boiler flue to recover waste heat from exhaust gases and use it to preheat boiler feedwater.

Installed Cost: £28,000 / €32,000

Energy Savings: 7–9% reduction in fuel consumption (~70,000–90,000 kWh/year)

Annual Cost Savings: £2,100–£2,700 / €2,400–€3,100

CO₂ Reduction: 14–18 tonnes per year

Payback Period: Approximately 3–4 years

2. Retrofit Burner Control System

Description: Electronic burner controls replace mechanical systems to optimise air/fuel ratios and combustion efficiency.

Installed Cost: £2,000–£10,000 / €2,300–€11,500

Energy Savings: 5–7% fuel reduction (~50,000–70,000 kWh/year)

Annual Cost Savings: £1,500–£2,100 / €1,700–€2,400

CO₂ Reduction: 10–14 tonnes per year

Payback Period: Around 2 years

3. HVAC Demand-Driven Ventilation Controls

Description: Smart HVAC controls adjust ventilation rates based on occupancy and air quality sensors.

Installed Cost: £5,000–£15,000 / €5,750–€17,250

Energy Savings: Up to 69% fan energy reduction (~34,500 kWh/year)

Annual Cost Savings: ~£4,100 / €4,700

CO₂ Reduction: 6–10 tonnes per year

Payback Period: Approximately 2 years

4. Refrigeration Cabinet Door & Curtain Retrofits

Description: Doors or strip curtains reduce warm air infiltration into refrigerated display cabinets.

Installed Cost: £200–£1,000 / €230–€1,150 per cabinet

Energy Savings: 20–40% reduction (600–1,200 kWh/year per cabinet)

Annual Cost Savings: £150–£300 / €175–€345

CO₂ Reduction: 0.1–0.25 tonnes per year

Payback Period: Less than 1 year

5. LED Lighting Retrofit Kits

Description: LED retrofit kits replace fluorescent or older lamps using existing fittings.

Installed Cost: £20–£60 per fitting (+ labour) / €23–€69

Energy Savings: 40–50% reduction (~100,000 kWh/year in large installations)

Annual Cost Savings: ~£8,000 / €9,200

CO₂ Reduction: ~20 tonnes per year

Payback Period: 1–2 years